



CURRICULUM VITAE
ASSOC. PROF. GAVAMUKULYA Yahaya, Ph.D.
BSc, MSc, Ph.D.



BIODATA

First name : Yahaya
Surname : Gavamukulya
Salutation : Professor
Nationality : Ugandan
Sex : Male
Date of Birth : 04th October, 1988
Place of Birth: Kaliro, Uganda
Parents : Father - Kirenzi Harun Gavamukulya; Mother - Kirenzi Jamia Babirye (Mrs.)
Marital status: Married
Spouse : Dr. Lulenzi Jalia Gavamukulya (Mrs.)
Children : 5 (2 Daughters, 3 Sons)

CONTACT ADDRESS

Physical address: Department of Biochemistry and Molecular Biology, Faculty of Health Sciences, Busitema University, 1460 Mbale, Pallisa Road, Mbale - Uganda. Map Plus Code: 35GG+R2 Mbale, Uganda

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[Google-Scholar](#) | [ORCiD](#) | [ResearchGate](#) | [Scopus](#) | [LinkedIn](#)

Websites: www.busitema.ac.ug | [Gavamukulya Yahaya](#)

KNOWLEDGE OF LANGUAGES

(Lulamogi and Lusoga, mother tongue), (English, fluency in spoken and written), (Arabic, fluency in reading and writing, poor at spoken), (French, poor), (Luganda, good), and (Swahili, poor)

CAREER OBJECTIVE

To acquire a challenging position in research and / or teaching, as well as outreach and to be a leader in research and teaching programs with a passion to innovate for sustainable development.

RESEARCH INTERESTS

Cancer Biology, Drug Discovery, Molecular Diagnostics, Non-communicable diseases, Natural Products Bioprospecting, and Green Nanobiotechnology

EDUCATION BACKGROUND

October 2016 to November 2019 Pan African University – African Union Commission; Pan African University Institute for Basic Sciences Technology and Innovation (PAUSTI) | Jomo Kenyatta University of Agriculture and Technology, Nairobi – Kenya. Doctor of Philosophy (Molecular Biology and Biotechnology). Title of Ph.D. Thesis: **“Biosynthesis of *Ammonia muricata* silver nanoparticles and biochemical evaluation of their anticancer activities on selected adenocarcinomas”**. **Supervisors:** Prof Fred Wamunyokoli (JKUAT, KE), Dr Esther N Maina (UoN, KE), Prof Hany A El-Shemy (Cairo University, EG) and Prof Gabriel Magoma (PAUSTI, KE)

September 2016 Stellenbosch University | African Doctoral Academy. NQF Level 7 Course – **Becoming A Lecturer: Teaching and Learning in Higher Education**. Joint Doctoral School: Makerere University / Stellenbosch University; Kampala, Uganda.

November 2012 to November 2014 Pan African University – African Union Commission; Pan African University Institute for Basic Sciences Technology and Innovation (PAUSTI) | Jomo Kenyatta University of Agriculture and Technology, Nairobi – Kenya. Master of Science in

Molecular Biology and Biotechnology. Title of M.Sc. Thesis: *Phytochemical composition, anti-oxidant and in vitro cytotoxic properties of extracts of leaves of Annona muricata (Graviola).*

Supervisors: Prof Fred Wamunyokoli (JKUAT, KE) and Prof Hany A El-Shemy (Cairo University, EG).

August 2008 to June 2011

Makerere University – Uganda. Bachelor of Science (first class honours): Fields of study; Biochemistry (major) and Botany (minor). Final year project: *Analysis of C - Reactive Protein and Alpha-1-Acid Glycoprotein by Radial immunodiffusion method: inter and intra- analysis variation.* **Project Supervisor:** Dr Rhona K Baingana (Ph.D.).

February 2006 to November 2007 King’s College, Budo. Uganda Advanced Certificate of Education (UACE).

March 2002 to November 2005 Bukoyo Secondary School. Uganda Certificate of Education (UCE)

January 1995 to November 2001 Bupadhengo Day and Boarding Primary School. Primary Leaving Examination (PLE)

WORK EXPERIENCE

WORK EXPERIENCE

August 2023 to date

Associate Professor (Biochemistry and Molecular Biology); Busitema University, Faculty of Health Sciences (BUFHS). *Duties and Responsibilities:* Teaching, Learning, Research and Outreach. *Programs:* Bachelor of Medicine and Bachelor of Surgery (MBChB), Bachelor of Science in Nursing (BNS), Bachelor of Science in Anaesthesia (BNA),

Bachelor of Pharmacy (PHA), M. Med (Internal Medicine), M. Med (Paediatrics and Child Health), M. Med (Obstetrics and Gynaecology), Master of Science in Pharmacology.

August 2020 to July 2023

Senior Lecturer (Biochemistry and Molecular Biology); Busitema University, Faculty of Health Sciences (BUFHS). *Duties and Responsibilities:* Teaching, Learning, Research and Outreach. *Programs:* Bachelor of Medicine and Bachelor of Surgery (MBChB), Bachelor of Science in Nursing (BNS), Bachelor of Science in Anaesthesia (BNA), M. Med (Internal Medicine), M. Med (Paediatrics and Child Health).

July 2015 to July 2020

Lecturer (Biochemistry and Molecular Biology); BUFHS. *Duties and Responsibilities:* Teaching, Research and Outreach. *Programs:* Bachelor of Medicine and Bachelor of Surgery (MBChB), Bachelor of Science in Nursing (BNS), Bachelor of Science in Anaesthesia (BNA), M. Med (Internal Medicine), M. Med (Paediatrics and Child Health). *Courses:* Cells, Tissues and Body Systems; Blood and Body Fluids; GIT, Nutrition and Metabolism; Head, Neck and Locomotor Systems; Neuroscience; Cardiovascular and Respiratory Systems; Endocrine and Reproductive Systems, General Principles of Pathology, Principles of Microbiology and Immunology, Introduction to Pharmacology and Therapeutics, Laboratory medicine and Biochemical disorders, Neurology.

October 2011 to September 2012

Education Officer (Biology and Chemistry); Nakavule College School, Iganga - Uganda.

July 2011 to September 2011	Quality Control Microbiologist/ QC Chemist; Abacus Parenteral Drugs Limited, Mukono - Uganda. <i>Duties and responsibilities:</i> General environmental monitoring, as well as microbial analysis of the parenteral products produced in each batch, Chemical analysis of the raw materials and Products for the different parameters, Routine chemical analysis for the different batches, Quality control and Quality Assurance.
June to August 2010	Industrial Trainee; Directorate of Government Analytical Laboratory, Kampala - Uganda.
January 2008 to 2009	Staff Trainee (Chemistry, Biology and Mathematics); Nakavule College School, Iganga – Uganda.

OTHER POSITIONS OF RESPONSIBILITY HELD

February 2026 to Date	Deputy Centre Leader - Administration and Partnerships, Natural Products Research and Innovations Centre (NaPRiC).
June 2025 to October 2025	Member, National Scientific and Planning Committee for the 12 th Annual National Research and Ethics Conference (ANREC) of the Uganda National Council for Science and Technology.
January 2025 to December 2025	Acting Head, Department of Biochemistry and Molecular Biology, BUFHS
March 2024 to January 2026	Deputy Centre Leader, Natural Products Research and Innovations Centre (NaPRiC).
September 2023 to Date	BUFHS Representative to Busitema University Senate.

September 2023 to Date	Chairperson, BUFHS Higher Degrees Committee (BUFHS-HDC).
October 2022 to November, 2022	Secretary to the Pan African University Alumni Association Electoral Committee.
May 2022 to April 2024	Lead Program Biochemist, INVONAT Program (<i>In vitro</i> studies of Natural therapeutics of Uganda Program), hosted by Uganda Virus Research Institute (UVRI).
March 2022	Ag. Deputy Dean Research and Academic Affairs, BUFHS.
October 2021 to Date	Member, Busitema University Contracts Committee.
October 2021 to November 2021	Pathogen Economy Cluster (PEC) Focal Person Busitema University, in organization of the Uganda National Science Week Celebrations and exhibitions under the Science, Technology and Innovations – Office of the President.
August 2021 to March 2022	Member, Busitema University Communications Policy Committee
August 2021 to March 2022	Member, Busitema University Guild E-voting System Development Committee
March 2021 to May 2022	Lead Project Biochemist, SARS-CoV2 <i>in vitro</i> studies on use of Ugandan Natural Products for Management of COVID-19. A collaborative project between Busitema University, Natural Chemotherapeutics Research Institute and Uganda Virus Research Institute (UVRI), through the Presidential Scientific Initiative on Epidemics (PRESIDE).

February 2021 to Date	Vice Chairperson, BUFHS Research and Ethics Committee (BUFHS-REC).
March 2021 to June 2021	Member Organizing Committee of the Busitema University 1 st Annual Science, Technology and Innovation Symposium (1BUSTIS).
February 2021 to March 2021	Secretary to the Busitema University Academic Staff Association (BUASA) Electoral Commission 2021.
January 2021 to Date	BUFHS Representative to the Busitema University Ceremonies Committee of Senate.
November 2020 to January 2025	Head, Department of Biochemistry and Molecular Biology, BUFHS
July 2020 to July 2023	General Secretary, The Kings College Budo 6B (KCB 6B) Class of 2007 Investments Club Limited.
February 2020 to August 2023	Chair, and Member BUFHS Higher Degrees Basic Sciences Sub Committee
January 2020 to Date	Member, BUFHS Education and Library Committee
January 2020 to May 2021	Chair and Member, BUFHS ICT Committee
January 2020 to October 2022	BUFHS Block 1 Coordinator, MBChB, BNA & BNS 1&2
January 2020 to October 2020	Acting Head, Department of Biochemistry and Molecular Biology, BUFHS
July 2019 to Date	Member, Community Based Education, Research and Services Committee (COBERS), BUFHS

July 2016 to August 2023	Member, BUFHS Higher Degrees Committee.
August 2016 to Date	Senior Advisor, BUFHS Basoga Nseete Students' Association
August 2015 to Date	Patron, BUFHS Muslim Students' Association
August 2015 to October 2017	Acting Head, Department of Biochemistry and Molecular Biology, BUFHS
March 2017 to December 2017	Interim Chair, PAUSTI Alumni Association
August 2016 to May 2018	BUFHS Block 1 Coordinator, MBChB, BNA & BNS 1&2
July 2016 to November 2016	Member, Scientific Committee for the 1 st Uganda National Conference on Antimicrobial Resistance
February 2016	Member, BUFHS Select Committee on Assessment of Undergraduate Practical Exams.
August 2015 to date	BUFHS Course Coordinator; MED/BNS 1202 GIT, Nutrition and Metabolism.
August 2015 to October 2017	Member, BUFHS Appointments and Promotions Board Committee.
August 2015 to October 2017	Member, BUFHS Finance Committee.
November 2012 to November 2014	Molecular Biology and Biotechnology Course Representative at the Pan African University Institute for Basic Sciences, Technology and Innovation.

September 2014 to Date	Secretary for Publicity, The Kings College Budo 6B (KCB 6B) Class of 2007 Association.
December 2013 to July 2014	Acting Deputy Corporate Communications Officer, Uganda Society of Professional Chemists (USPC)
2010 to 2011	President, Makerere University Biochemistry Society
2006 to 2007	General Secretary King's College Budo Anti Aids Club; Junior Monitor Canada House; and Vice Chairman Muslim Students' Association.
2004 to 2005	Committee Member, Bukoyo Muslim Students' Association.

RESEARCH, PUBLICATIONS, SUPERVISION, AND OUTREACH

FILED PATENTS AND UTILITY MODELS

a. Filed Patents

Inventors: **Gavamukulya, Y.**, Maina, E.N., Madivoli, E.S., El-Shemy, H.A., Magoma, G., Wamunyokoli, F. Filing Date: 24-04-2019. Title of the Invention: Synthesis of Silver Nanoparticles from Extracts of *Annona muricata* and Use Thereof. Filing Authority: **African Regional Intellectual Property Organization (ARIPO)**. ARIPO Patent Application number: **AP/P/2019/011514**. Applicants: Pan African University Institute for Basic Sciences, Technology and Innovation; Busitema University; and Gavamukulya Yahaya. Designation States: UG, KE, TZ, ZW, and BW. AP; ARIPO Journal; Vol. XXXVI, No. 4, Page 23. Application renewed: AP; ARIPO Journal; Vol. XXXVII, No. 6, Page 28. Lapsed, 2021.

a. Utility Models

Inventors: **Gavamukulya, Y.**, Maina, E.N., Madivoli, E.S., El-Shemy, H.A., Magoma, G., Wamunyokoli, F. Filing Date: 24-04-2019. Title of the Invention: Synthesis of Silver

Nanoparticles from Extracts of *Annona muricata* and Use Thereof. Filing Authority: **African Regional Intellectual Property Organization (ARIPO)**. ARIPO Utility Model Application number: **AP/U/2020/000179**. Applicants: Pan African University Institute for Basic Sciences, Technology and Innovation; Busitema University; and Gavamukulya Yahaya. Designation States: UG, KE, TZ, ZW, and BW. AP; ARIPO Journal; Vol. XXXVII, No. 4, Page 91

VIABLE PRODUCTS DEVELOPED

Together with colleagues we participated in the development of the following products:

TAZCOV™	For management of acute upper respiratory tract infections
CARIENIL™ Herbal Toothpaste	For management of dental carries and associated problems
HERICOP™ Soap	For management of skin conditions
GLUKOTAK™	For supportive management of Type 2 Diabetes Mellitus

PUBLICATIONS

a. Peer Reviewed Papers

New Publications (July 2023 To Date)

Obakiro, S.B., Nabitandikwa C., Kiyimba, K., Ocan, M., **Gavamukulya, Y.**, Andima., M., Lukwago, T.W., Maseruka, R., Chebijira, M., Hokello, J., Kibuule, D., Nabatanzi, A., Orena, S., Waako, P., Owor, R.O. (2025). *In vitro* antiplasmodial activity, acute toxicity and phytochemical quantification of selected medicinal plants for the management of uncomplicated malaria in eastern Uganda. **Journal of Ethnopharmacology**. 358 (2026) 121015. DOI: <https://doi.org/10.1016/j.jep.2025.121015>

Gidudu, M., Nandutu, L., Ankunda, R., Eputai, J., Lulenzi, J., Ssenyonga, L., **Gavamukulya, Y*** and Nabirye, R.C. (2025). Factors Affecting Lifestyle Modification Among Adults with Type II Diabetes Mellitus Attending Care at Mbale Regional Referral Hospital in Mbale City, Eastern Uganda: A Mixed Methods Study. **Journal of Public Health Research**. 14 (1): 1-11. DOI: <https://doi.org/10.1177/22799036251395268>

Opio, M., Kenedy Kiyimba, K., Nabitandikwa, C., Maseruka, R., Lukwago, T.W., Andima, M., Chebijira, M., Edeya, S.T., Nabatanzi, A., **Gavamukulya, Y.**, Kibuule, D., Waako, P., Owor, R.O and Obakiro, S.B. (2025). Unraveling the Therapeutic Potential of *Tephrosia linearis*: Anti-Inflammatory, Analgesic Activity, and Molecular Docking Approaches. **Pharmacological Research - Natural Products**. 9 (2025) 100389 DOI: <https://doi.org/10.1016/j.prenap.2025.100389>

Akurut, E., **Gavamukulya, Y.**, Mulindwa, J., Isiagi, M., Galiwango, R., Bbuye, M., Lujumba, I., Kiberu, K., Nabisubi, P., Kebirungi, G., Kambugu, A., Castelnuovo, B., Nkurunungi, G., Jjingo, D., Oketch, B., Kateete, D.P., & Mboowa, G. (2025). Design of a multi-epitope vaccine against drug-resistant *mycobacterium tuberculosis* and *mycobacterium bovis* using reverse vaccinology. **Scientific Reports**. 15:27298. DOI: <https://doi.org/10.1038/s41598-025-11768-3>

Kiyimba, K., Ayaz, A., Iqbal C.M., Obakiro, S.B., **Gavamukulya, Y***, Guantai, E.M., and Munyendo., L.W. (2025). Phytochemical Analysis and Toxicity Evaluation of *Polyscias fulva* Stem Bark Extract using Gas Chromatography-Mass Spectrometry, Fourier Transform Infrared Spectroscopy, In Silico, and In Vivo Studies in Wistar Rats. **Discover Toxicology**. 2:11. DOI: <https://doi.org/10.1007/s44339-025-00031-z>

Kiyimba, K., Ayaz, A., Iqbal C.M., Rehman. K., Hasan, M., Jabbar, A., Obakiro, S.B., Raza S.M., Munyendo., L.W., Guantai, E.M., **Gavamukulya, Y.** (2025). Green synthesized *Polyscias fulva* silver nanoparticles ameliorate uterine fibroids in female Wistar Albino rats. **PLoS One** 20(5): e0323260. DOI: <https://doi.org/10.1371/journal.pone.0323260>

Obakiro, S.B., Kiyimba, K., **Gavamukulya, Y.**, Maseruka, R., Nabitandikwa, C., Kibuuka, R., Lulenzi, J., Lukwago, W.T., Chebijira, M., Opio, M., Edeya, S.T., Kibuule, D., Oriko, O.R., Waako, P., Makaye, A., Daniel, M. Shadrack., Andima, M. Deciphering

the molecular mechanism of aloe-emodin in managing type II diabetes mellitus using network pharmacology, molecular docking, and molecular dynamics simulation approaches. *In Silico Pharmacology* (2025) 13:45, DOI: <https://doi.org/10.1007/s40203-025-00337-1>

Kiyimba, K., Munyendo, L., Obakiro, S.B., **Gavamukulya, Y.**, Ayaz, A., Iqbal C.M., Muhammad. S., Zaheer. U, and Guantai, E.M. Drug likeliness, pharmacokinetics profiling and efficacy of *Polyscias fulva* bioactive compounds in the management of uterine fibroids; An integrative *in silico* and *in vivo* approach. *Journal of Molecular Graphics and Modelling* 137 (2025) 108984, DOI: <https://doi.org/10.1016/j.jmgm.2025.108984>

Owor, R.O., Kawuma, C., Nantale, G., Kiyimba, K., Obakiro, S.B., Ouma, S., Lulenzi, J., **Gavamukulya, Y.**, Chebijira, M., Lukwago, T.W., Egor, M., Andima, M., Kibuule, D., Waako, P. and Hokello, J. (2024). Ethnobotanical survey and Phytochemistry of Medicinal plants used in the management of HIV/AIDS in eastern Uganda. *Heliyon* 10 (2024) e31908. DOI: <https://doi.org/10.1016/j.heliyon.2024.e31908>

Kagoya, C., **Gavamukulya, Y*** and Soita, D. J. (2024). Knowledge, perceptions and practices towards blood donation among undergraduate medical students in an upcountry Ugandan university: a mixed methods study. *Global Public Health*; 19:1. DOI: <https://doi.org/10.1080/17441692.2024.2311679>

Obakiro, S.B., Kiyimba, K., Oriko, O.R., Andima, M., Lukwago, W.T., Kawuma, C., **Gavamukulya, Y.**, Nabatanzi, A., Anywar, G., Kibuule, D., Kato, C.D., and Waako, P. (2024). Acute and subacute toxicity profile of ethanolic stem bark extract of *Albizia coriaria* Welw. ex Oliv. in Wistar albino rats. *Toxicology and Applied Pharmacology*; 12: 178- 185. DOI: <https://doi.org/10.1016/j.toxrep.2024.01.005>

Nekaka, R., Oboth, P., **Gavamukulya, Y.**, Mpagi, J.L., Ssenyonga, L., Wandabwa, J., Nteziyaremye, J., Waako, P., and Iramiot, J.S. (2024). The Implementation and Success of Community Based Education and Research Services and Inter-Profession Education Programme at a Rural Health Sciences Faculty in Uganda: Case of Busitema University. *Journal of Health and Medical Research*, Vol.6, Issue 1, 1-5.

Namugerwa, C.H., **Gavamukulya, Y***, and Barugahare, J.B. (2023). Knowledge and attitude towards sickle cell anemia among care-givers of paediatric sickle cell patients at a tertiary hospital in Uganda. **BMC Research Notes**; 16: 351. DOI: <https://doi.org/10.1186/s13104-023-06633-3> ; Shared it link: <https://rdcu.be/dr9X8>

Obakiro, S.B., Kiyimba, K., Lukwago, W.T., Lulenzi, J., Oriko, O.R., Andima, M., Hokello, J.F., Kawuma, C., Nantale, G., Kibuule, D., Anywar, G., Waako, P., and **Gavamukulya, Y.** (2023). Ethnobotanical study of plants used in management of diabetes mellitus in Eastern Uganda. **Phytomedicine Plus**; 3 (2023) 100486. DOI: <https://doi.org/10.1016/j.phyplu.2023.100486>

Earlier Publications (2014 to June 2023)

Ahmed A. Abdille, Shedrack Reuben Kitimu, Mark M. Ndubi, Josephine Kimani, Esther N. Maina, Wallace Bulimo, **Yahaya Gavamukulya**, and Fred Wamunyokoli. (2022). Sub-acute and sub-chronic toxicity assessment of the antimicrobial peptide Dermaseptin B2 on biochemical, haematological and histopathological parameters in BALB/c mice and Albino Wistar rats. **Heliyon**; 8 (2022) e12124. DOI: <https://doi.org/10.1016/j.heliyon.2022.e12124>

Kisakye, E., **Gavamukulya, Y***, and Barugahare, J.B. (2022). Sickle cell trait screening in students in a Ugandan university: a cross-sectional study. **Journal of International Medical Research**; 50(11) 1-11. DOI: <https://doi.org/10.1177/03000605221138491>

Mbabazi, F.K., **Gavamukulya, Y.**, Awichi, R., Olupot-Olupot, P., Rwahwire, S., Biira, S., and Luboobi, L.S. (2022). A Mathematical Model Approach for Prevention and Intervention Measures of the COVID-19 Pandemic in Uganda. **Asian Research Journal of Mathematics**; 18(11): 233-248. DOI: <https://doi.org/10.9734/ARJOM/2022/v18i11598>

Tumwakire, E., Arnd, H., and **Gavamukulya, Y***. (2022). A qualitative exploration of Ugandan mental health care workers' perspectives and experiences on sexual and reproductive health of people living with mental illness in Uganda. **BMC Public Health**; 22:1722 <https://doi.org/10.1186/s12889-022-14128-2> ; <https://rdcu.be/cVScE>

Tumwakire, E., Ashaba, S., Mubangizi, V., and **Gavamukulya, Y***. (2022) Sexual and reproductive health knowledge and practices among youth with and without mental illness in Uganda: a comparative study. *Tropical Medicine and Health*; 50, 51. DOI: <https://doi.org/10.1186/s41182-022-00444-1> ; <https://rdcu.be/cTQBg>

Semwogerere, T., Kucel, S.B., Igga, H., Lusiba, B., **Gavamukulya, Y***, Namwanje, S., Awichi, R.O., Matovu., J.K.B., and Barugahare, J.B.. (2022). A Scoping Analysis of Theories, Models, and Standard Operating Procedures for the COVID-19 Pandemic in Uganda. *International Journal of TROPICAL DISEASE and Health*; 43 (14): 1-7. DOI: <https://doi.org/10.9734/IJTDH/2022/v43i1430638>

Abdille, A.A., Kimani, J., Wamunyokoli, F., Bulimo, W., **Gavamukulya, Y.**, and Maina, E.N. (2021). Dermaseptin B2's Anti-proliferative Activity and Down Regulation of Anti-proliferative, Angiogenic and Metastatic Genes in Rhabdomyosarcoma RD Cells *In Vitro*. *Advances in Bioscience and Biotechnology*, 12, 337-359, DOI: <https://doi.org/10.4236/abb.2021.1210022>

Bor, H., Maina. E.N, Nyambega. B., Patel. T. K., Ochieng' Olwal. C., Nalyanya., W., and **Gavamukulya, Y***. (2021). The Potential of Differentiation-Related Gene-1 (*DRG1*) as a Biomarker for Metastasis of Estrogen Receptor-Positive Breast Cancer. *Journal of Advances in Medicine and Medical Research*; 33(20): 162-169, DOI: <https://doi.org/10.9734/IAMMR/2021/v33i2031118>

Obakiro. S.B., Kiprop. A., Kigondu. E., K'owino. I., Kiyimba. K., Kato. C.D., **Gavamukulya. Y.** (2021). Sub-acute toxicity effects of methanolic stem bark extract of *Entada abyssinica* on biochemical, haematological and histopathological parameters in Wistar Albino rats. *Frontiers in Pharmacology*; <https://doi.org/10.3389/fphar.2021.740305>

Chikwana. N., Maina. E.S., **Gavamukulya. Y***, Bulimo. W., and Wamunyokoli. F. (2021). Antiproliferative Activity, *c-Myc* and *FGFR1* Genes Expression Profiles and Safety of *Annona muricata* Fruit Extract on Rhabdomyosarcoma and BALB/c Mice. *Journal of Complementary and Alternative Medical Research*; 14(4): 30-46, DOI: <https://doi.org/10.9734/JOCAMR/2021/v14i430253>

Gavamukulya, Y*, Maina, E.N., El-Shemy, H.A., Meroka, A.M., Kangogo, G. K., Magoma, G., and Wamunyokoli, F. (2021). *Annona muricata* mediated silver nanoparticles exhibit strong anticancer activities against cervical and prostate adenocarcinomas through regulation of *CASP9* and the *CXCL1/CXCR2* genes axis. **Tumor Biology**. 43 (2021):37-55, DOI: <https://doi.org/10.3233/TUB-200058>

Nekaka, R., Oboth, P., Nteziyaremye, J., **Gavamukulya, Y.**, Ssenyonga, L.V.N., Iramiot, J.S. (2021). Sero-Prevalence and Factors Associated with *Helicobacter pylori* Infection in a Rural Population in Eastern Uganda: A community cross-sectional study. **Prim Health Care**, 2021, 11(4), 378

Obakiro, S.B., Kiprop, A., Kigundu, E.M., Kowino, I., Odero, M.P., Manyim, S., Omara, T., **Gavamukulya, Y.**, Bunalema, L., and Namukobe, J. (2021). Traditional Medicinal Uses, Phytoconstituents, Bioactivities, and Toxicities of *Erythrina abyssinica* Lam. ex DC. (Fabaceae): A Systematic Review. **Evidence Based Complementary and Alternative Medicine**. Volume 2021, Article ID 5513484, 43 pages, <https://doi.org/10.1155/2021/5513484>

Wakooko, P., **Gavamukulya, Y***, and Wandabwa, J. (2020). Viral load suppression and associated factors among HIV Patients on antiretroviral treatment in Bulambuli District, Eastern Uganda: A retrospective cohort study. **Infectious Diseases: Research and Treatment**; 13 (1):1-9. DOI: <https://doi.org/10.1177/1178633720970632>

Tumusiime, R., Mukasa, C., Kisakya-Maria, K.A, Neumbe, I.M., Odyeny, J., Maube, B., **Gavamukulya, Y***, and Nekaka, R. (2020). Baseline Assessment of Risk Factors of Presumptive Tuberculosis among under Five Children Living with an Index Client under Treatment in Mbale District, Eastern Uganda. **Microbiology Research Journal International**; 30(5):1-8. DOI: <https://doi.org/10.9734/mrji/2020/v30i530214>

Mbabazi, F.K., **Gavamukulya, Y.**, Awichi, R., Olupot-Olupot, P., Rwahwire, S., Biira, S., and Luboobi, L.S. (2020). COVID-19 Forecast and Prediction: A Mathematical Model Approach for Prevention and Intervention Measures of the COVID-19 Pandemic in Uganda. **MedRxiv Pre-Print**; DOI: <https://doi.org/10.1101/2020.05.08.20095067>

Maina, E.N., Njau, V.N., and **Gavamukulya, Y***. (2020). Phytochemical analysis and Antileishmanial activity of *Clerodendrum myricoides* and *Salvadora persica* plant extracts against *Leishmania major*. **Journal of Complementary and Alternative Medical Research**; 9(1): 29-44. DOI: <https://doi.org/10.9734/jocamr/2020/v9i130134>

Madivoli, E. S., Kareru, P. G., Gachanja, A. N., Mugo, S. M., Makhanu, D. S., Wanakai, S. I., **Gavamukulya, Y.** (2020). Facile Synthesis of Silver Nanoparticles Using *Lantana trifolia* Aqueous Extracts and Their Antibacterial Activity. **Journal of Inorganic and Organometallic Polymers and Materials**. <https://doi.org/10.1007/s10904-019-01432-5>

Nabwana, W. B., Namayanja, S. S., Kemigisha, C., Kisakye, E., Kusetula, A. K., Wakabi, S., Wambi, I., Musiime, I., Nekaka, R., **Gavamukulya, Y***. (2019). Socio-demographic determinants of Vaccine Coverage for Pneumococcus and Rota Virus Among Under Five Children in Busolwe Town Council, Butaleja District, Eastern Uganda. **International Journal of TROPICAL DISEASE and Health**; 39 (3): 1-13. DOI: <https://doi.org/10.9734/IJTDH/2019/v39i3302094>

Gavamukulya, Y., Maina, E.N., Wamunyokoli, F., Meroka, A.M., Madivoli, E.S., El-Shemy, H.A., and Magoma, G. (2019). Synthesis and characterization of silver nanoparticles from ethanolic extracts of leaves of *Annona muricata*: A green nanobiotechnology approach. **Biotechnology Journal International**; 23 (4): 1-18. DOI: <https://doi.org/10.9734/bji/2019/v23i430083>

Gavamukulya, Y., Maina, E.N., Meroka, A., El-Shemy, H.A., Magoma, G., and Wamunyokoli, F. (2019). In search for new anticancer drugs: Data for cytotoxic activities of green synthesized silver nanoparticles from ethanolic extracts of fruits and leaves of *Annona muricata* and 5-Fluorouracil against HeLa, PC3 and PNT1A Cell lines. **Data in Brief**; 26:104442. DOI: <https://doi.org/10.1016/j.dib.2019.104442>

Gavamukulya, Y., Maina, E.N., Meroka, A., Madivoli, E.S., El-Shemy, H.A., Wamunyokoli, F., and Magoma, G. (2019). Green Synthesis and Characterization of Highly Stable Silver Nanoparticles from Ethanolic Extracts of Fruits of *Annona muricata*. **Journal of Inorganic and Organometallic Polymers and Materials**. <https://doi.org/10.1007/s10904-019-01262-5> . Url: <https://rdcu.be/bK3sP>

Nabwana, W. B., Namayanja, S. S., Kemigisha, C., Kisakye, E., Kusetula, A. K., Wakabi, S., Wambi, I., Musiime, I., Nekaka, R., **Gavamukulya, Y***. (2019). Towards Universal Health Coverage: Data for Determinants of Immunization Coverage of Pneumococcal and Rota Virus Vaccines Among Under Five Children in Busolwe Town Council, Butaleja District, Eastern Uganda. **Data in Brief**; 25:104269. DOI: <https://doi.org/10.1016/j.dib.2019.104269>

Nambala, E., Byakika-Tusiime, J., and **Gavamukulya, Y***. (2019). Nutritional knowledge and practice among Patients with non-communicable diseases attending Mbale Regional Referral Hospital in Eastern Uganda: A cross sectional study. **International Journal of TROPICAL DISEASE and Health**; 37 (1): 1-11. DOI: <https://doi.org/10.9734/IJTDH/2019/v37i130154>

Gavamukulya, Y., El-Shemy, H.A., Meroka, A., Madivoli, E.S., Maina, E.N., Wamunyokoli, F., and Magoma, G. (2019). Advances in green nanobiotechnology: Data for synthesis and characterization of silver nanoparticles from ethanolic extracts of fruits and leaves of *Annona muricata*. **Data in Brief**; 25:104194. DOI: <https://doi.org/10.1016/j.dib.2019.104194>

Gavamukulya, Y., Maina, E.N., Meroka, A., Madivoli, E.S., El-Shemy, H.A., Magoma, G., Wamunyokoli, F. (2019). Liquid Chromatography Single Quadrupole Mass Spectrometry (LC/SQ MS) Analysis Reveals Presence of Novel Antineoplastic Metabolites in Ethanolic Extracts of Fruits and Leaves of *Annona muricata*. **Pharmacognosy Journal**. 11(4): 660–668. DOI: <https://doi.org/10.5530/pj.2019.11.104>

Oboth, P., **Gavamukulya, Y***, Barugahare, B.J. (2019). Prevalence and clinical outcomes of *Plasmodium falciparum* and intestinal parasitic infections among children in Kiryandongo refugee camp, mid-Western Uganda: A cross sectional study. **BMC Infectious Diseases**; 19(295):1-8. DOI: <https://doi.org/10.1186/s12879-019-3939-x> Url: <https://rdcu.be/buj6I>

Aguti, B., Kalema, G., Lutwama, D.M, Maweje, M.L., Mupeyi, E., Okanya, D., Nekaka, R., and **Gavamukulya, Y***. (2018). Knowledge and Perception of Caregivers about Risk Factors and Manifestations of Pneumonia among Under Five Children in Butaleja

District, Eastern Uganda. **Microbiology Research Journal International**; 25(3):1-11. DOI: <https://doi.org/10.9734/MRJI/2018/44179>

Manzi, F., Ogwang. J., Akankwatsa, A., Wokali, O.C., Obba, F., Bumba, A., Nekaka, R., and **Gavamukulya, Y***. (2018). Factors Associated with Teenage Pregnancy and its Effects in Kibuku Town Council, Kibuku District, Eastern Uganda: A Cross Sectional Study. **Prim Health Care** 8: 298. DOI: <https://doi.org/10.4172/2167-1079.1000298>

Gavamukulya, Y., Wamunyokoli, F., and El-Shemy, H.A. (2017). *Annona muricata*: is the natural therapy to most disease conditions including cancer growing in our backyard? A systematic review of its research history and future prospects. **Asian Pac J Trop Med**; 10 (9): 835-848. DOI: <http://dx.doi.org/10.1016/j.apjtm.2017.08.009>

Abou-Elella, F., Hanafy, E. A., and **Gavamukulya, Y***. (2016). Determination of antioxidant and anti-inflammatory activities, as well as in vitro cytotoxic activities of extracts of *Anastatica hierochuntica* (Kaff Maryam) against HeLa cell lines. **Journal of Medicinal Plants Research**, 10(7), 77-87. DOI: <https://doi.org/10.5897/JMPR2015.6030>

Gavamukulya, Y., Abou-Elella, F., Wamunyokoli, F., and El-Shemy, H.A. (2015). GC-MS Analysis of Bioactive Phytochemicals Present in Ethanolic Extracts of Leaves of *Annona muricata*: A Further Evidence for Its Medicinal Diversity. **Pharmacognosy Journal**; 7 (5):300-304. DOI: <https://doi.org/10.5530/pj.2015.5.9>

Gavamukulya, Y., Abou-Ellela, F., Wamunyokoli, F., and El-Shemy, H.A. (2014). Phytochemical screening, anti-oxidant activity and *in vitro* anticancer potential of ethanolic and water leaves extracts of *Annona muricata* (Graviola). **Asian Pac J Trop Med**; 7(1): S355-S363. Doi: [https://doi.org/10.1016/S1995-7645\(14\)60258-3](https://doi.org/10.1016/S1995-7645(14)60258-3)

b. Books and Theses

Gavamukulya, Y., (2019). Ph.D. Thesis: **Biosynthesis of *Annona muricata* silver nanoparticles and biochemical evaluation of their anticancer activities on selected adenocarcinomas**. Pan African University Institute for Basic Sciences, Technology and Innovation, Nairobi, Kenya.

Gavamukulya, Y., (2014). MSc Thesis: Phytochemical Composition, Anti-oxidant and *in Vitro* Cytotoxic Properties of Extracts of Leaves of *Annona muricata* (Graviola). Pan African University Institute for Basic Sciences, Technology and Innovation, Nairobi, Kenya. Doi: <https://doi.org/10.13140/RG.2.1.3446.4484> .

c. Datasets, Programs, Codes and Sequences

Nabwana, W. B., Namayanja, S. S., Kemigisha, C., Kisakye, E., Kusetula, A. K., Wakabi, S., Wambi, I., Musiime, I., Nekaka, R., **Gavamukulya, Y.** (2019), “Data for Determinants of Immunization Coverage of PCV and Rota Virus Among Under Five Children in Busolwe Town Council, Butalejja District, Eastern Uganda”, Mendeley Data, v1, <http://dx.doi.org/10.17632/zr2w886dg2.1>

Gavamukulya, Y., Maina, E. N., Meroka, A. M., Madivoli, E. S., El-Shemy, H. A., Wamunyokoli, F., Magoma, G. (2019). Data for green synthesis and characterization of silver nanoparticles from ethanolic extracts of fruits of *Annona muricata*. Mendeley Data, v1, <http://dx.doi.org/10.17632/jkj2x782wh.1>

Gavamukulya, Y., El-Shemy, H.A., Meroka, A. M., Madivoli, E. S., Magoma, G., Wamunyokoli, F., Maina, E. N. (2019). Data for green synthesis and characterization of silver nanoparticles from ethanolic extracts of leaves of *Annona muricata*. Mendeley Data, v1, <http://dx.doi.org/10.17632/f4mb6b488n.1>

Wakooko, P., **Gavamukulya, Y.**, Byakika-Tusiime, J. (2019). Data on viral load suppression and associated factors among HIV Patients on antiretroviral treatment in Bulambuli District, Eastern Uganda. Mendeley Data, v1 <http://dx.doi.org/10.17632/9jwbg82wg7.1>

Nambala, E., Byakika-Tusiime, J., **Gavamukulya, Y.** (2019). Data for nutritional knowledge and practice among patients with non-communicable diseases attending Mbale Regional Referral Hospital in Eastern Uganda. Mendeley Data, v1. <http://dx.doi.org/10.17632/y5kdzmzj7b.1>

d. Manuscript under Review

Lubangakene, D., **Gavamukulya, Y**, Sasiya, R., Wanume, B., and Katuramu, R. Factors Associated with Glycemic Control Among Patients with Type 2 Diabetes Mellitus at Mbale Regional Referral Hospital: A Cross Sectional Study. **Diabetes, Metabolic Syndrome and Obesity.**

Nandutu, L., Madeline Powers¹, Ankunda, R., Gidudu, M., Lulenzi, J., Ssenyonga, L., Eputai, J., Nabirye, R.C., and **Gavamukulya, Y**. “After realizing that they are all carriers, they separate.”: Knowledge and Practices About Preconception Sickle Cell Screening Among Youth in Industrial City Division, Mbale City, Eastern Uganda. **BMC Public Health.**

Sokei JO, Maina NW, Mbugua RW, Ng’etich JK, **Gavamukulya Y**, Kirira PG, Mwitari PG. Biogenic synthesis and characterization of relatively safe Azadirachta indica silver nanoparticles with potential in colorectal cancer treatment and management. **Natural Products communications.**

Ankunda, R., Nandutu, L., Gidudu, M., Eputai, J., Nabirye, R.C., Ssenyonga, L., and **Gavamukulya, Y***. Knowledge, Perceptions and Barriers to Enrollment into Cervical Cancer Screening Among Learners in an upcountry University in Eastern Uganda. **Clinical Nursing Research.**

Kiyimba, K., Owor, R.O., Obakiro, S.B., Kawuma, C., Maseruka, R., Lukwago, T.W., Ouma, S., Chebijira, M., **Gavamukulya, Y.**, Kibuule, D., Waako, P. and Hokello, J. Acute and Sub-acute Toxicity Evaluation of the Polyherbal mixture from selected Medicinal Plants used to manage HIV/AIDS in Eastern Uganda. **Plos ONE**

GRADUATE STUDENTS’ SUPERVISION - Ph.D

a. Completed

N/A

b. On going

Kiyimba, Kenedy. (January 2021 – 2026), **Defended May 14th 2026.** Green synthesis and antiproliferative effect of *Polyscias fulva* silver nanoparticles on estradiol benzoate-induced uterine fibroids in Wistar rats. Thesis for the Award of the **Degree of Doctor of Philosophy** in Molecular Pharmacology of The University of Nairobi.

Oboth, Paul. (April 2022 – To date). Development and Evaluation of Micro-Array Based Protein Biomarkers for Detection of *Plasmodium falciparum* Among Children in Uganda. Thesis for the Award of the **Degree of Doctor of Philosophy** (Immunology and Molecular Biology) of Makerere University.

Orech, Sam. (June 2025 – To date). Climate Change and Malaria Prevalence Among Children Under Five Years in Uganda: Trends, Risk Factors and Adaptation Strategies. Thesis for the Award of the **Degree of Doctor of Philosophy** in Public Health of Jaramogi Oginga Odinga University of Science And Technology

Kabuye, Umar. (July 2025 – To date). Post-Traumatic Brain Injury Hypo-thyroidism and the Role of Thyroxine in Rehabilitation at Mbarara Regional Referral Hospital. Thesis for the Award of the **Degree of Doctor of Philosophy** in Medicine of Mbarara University of Science and Technology

GRADUATE STUDENTS' SUPERVISION - MASTER'S

a. Completed

Derick Lubangakene. (October 2023 – October 2025). Factors associated with poor glycemic control among patients with Type 2 Diabetes Mellitus attending Diabetic clinic at Mbale Regional Referral Hospital. Dissertation for the Award of the **Degree of Master of Public Health** of Busitema University. **Defended 7th October, 2025, Scheduled to graduate on 28th November 2025.**

Shakiro Justine. (August 2021 – February 2024). Factors Associated with Quality of Life Among Persons Living with HIV On Highly Active Anti-retroviral therapy in Eastern Uganda. Dissertation for the Award of the **Degree of Master of Public Health** of Busitema University. **Graduated: Thursday 28th March, 2024**

Wakooko, Paul. (February 2018 – December 2019). Viral Load Suppression and Associated Factors Among HIV Infected Individuals on Antiretroviral Treatment in Bulambuli District, Eastern Uganda: A Retrospective Cohort Study. Dissertation for the Award of the **Degree of Master of Public Health** of Busitema University. **Graduated: Friday 19th March, 2021**

Nambala, Esther. (April 2017 – December 2019). Nutritional Knowledge and Practice Among Patients with Non-Communicable Diseases Attending Mbale Regional Referral Hospital in Eastern Uganda: A Cross Sectional Study. Dissertation for the Award of the **Degree of Master of Public Health** of Busitema University. **Graduated: Friday 19th March, 2021**

Oboth, Paul. (April 2017 – September 2018). Prevalence of *Plasmodium falciparum* and Intestinal Parasitic Infections Among Children in Kiryandongo Refugee Camp Mid-Western Uganda: A Cross-sectional Study. Dissertation for the Award of the **Degree of Master of Public Health** of Busitema University. **Graduated: Wednesday 3rd October, 2018**

b. On going

Nawita Emmanuel Were. (August 2022 – To date). Factors Associated with Use of Herbal Medicines for COVID-19 Related Symptoms Among Households in Mukono Municipality, Uganda. Dissertation for the Award of the **Degree of Master of Public Health** of Busitema University.

Senja David. (November 2024 – To date). Coping Strategies and Quality of Life Among Caregivers of Sickle Cell Patients Attending the Sickle Cell Clinic at Pallisa General Hospital. Dissertation for the Award of the **Degree of Master of Public Health** of Busitema University.

UNDERGRADUATE STUDENTS' PROJECTS MENTORSHIP AND SUPERVISION

Nandutu, Lornah. (March 2024 – To November 2024). Knowledge and Practices About Preconception Sickle Cell Screening Among Pregnant Mothers Attending Antenatal Care at Mbale Regional Referral Hospital. Research Project for the Award of the Degree of Bachelor of Science in Nursing of Busitema University.

Gidudu, Mariam. (March 2024 – November 2024). Factors Affecting Lifestyle Modification Among Adults with Type II Diabetes Mellitus Attending Care at Mbale Regional Referral Hospital In Mbale City, Eastern Uganda. Research Project for the Award of the Degree of Bachelor of Science in Nursing of Busitema University.

Ankunda, Ronnet. (March 2024 – November 2024). Knowledge, Perceptions and Barriers To Enrollment Into Cervical Cancer Screening Among Learners At Busitema University Faculty of Health Sciences. Research Project for the Award of the Degree of Bachelor of Science in Nursing of Busitema University.

Kagoya, Catherine. (March 2022 – To January 2023). Knowledge, Perceptions and Practices Towards Blood Donation Among Undergraduate Medical Students at Busitema University Faculty of Health Sciences. Research Project for the Award of the Degree of Bachelor of Science in Nursing of Busitema University.

Kisakye, Erinah. (March 2021 – January 2022). Sickle Cell Trait Screening Among Youth in Ugandan Universities: A Case Study of Busitema University Faculty of Health Sciences, Mbale, Uganda. Research Project for the Award of the Degree of Bachelor of Science in Nursing of Busitema University.

Nakirya, Sumaya H. (March 2021 – January 2022). Prevalence of Acute Upper Respiratory Tract Infections in Under 5 Children Hospitalised at Mbale Regional Referral Hospital: A Retrospective Cross sectional Study. Research Project for the Award of the Degree of Bachelor of Science in Nursing of Busitema University.

Namugerwa, Christine H. (March 2021 – January 2022). Knowledge and Attitude Towards Sickle Cell Anemia Among Care Givers of Paediatric Sickle Cell Patients at Mbale Regional Referral Hospital. Research Project for the Award of the Degree of Bachelor of Science in Nursing of Busitema University.

Nabwana Wafana Brenda, Namayanja Sidney Sylvia, Wakabi Sylvester, Kemigisha Collete, Kusetula Amos Kudiza, and Kisakye Erina. (2018/2019). Determinants of Immunization coverage of Pneumococcal and Rota virus vaccines among under five children in Busolwe Town Council, Butalejja District, Eastern Uganda. BUFHS - MBChB II & BNS II, 2018/2019 Academic year

Akankwatsa Allen., Manzi Fred., Obaa Francis., Ogwang Joshua., and Wokali Oliver. (2017/2018). Improvement of Knowledge About the Factors That Lead to And Effects of Teenage Pregnancy in Kibuku Town Council. BUFHS - MBChB III & BNS III, 2017/2018 Academic year

Aguti Beatrice, Kalema Godfrey, Lutwama Dinah Maria, Maweje Martin Loy, and Mupeyi Emmanuel. (2017/2018). Determination of The Factors Contributing to The High Prevalence of Pneumonia Among Under-Five Children in Butalejja District, Eastern Uganda. BUFHS - MBChB II & BNS II, 2017/2018 Academic year.

Akankwatsa Allen., Manzi Fred., Obaa Francis., Ogwang Joshua., and Wokali Oliver. (2016/2017). Determination of The Root Causes and Effects of Teenage Pregnancies in Kibuku District. BUFHS - MBChB II & BNS II, 2016/2017 Academic year

Keera Fuuna Ivan., Atyera Jimmy., Ssali Henry Kafeero., Imalingat Julius., and Iisa Pascal. (2015/2016). Health Education as an Intervention Against The High Prevalence of Malaria Among Pregnant Women in Kobolwa Parish, Kibuku District. BUFHS - MBChB III, 2015/2016 Academic year

GRADUATE THESIS EXAMINATION (EXTERNAL)

Byarugaba Isaac. (2025). "Impact of heavy metals on antibiotic resistance of *Escherichia coli* from slum wastewater: A case of Kawempe division, Kampala, Uganda". Dissertation for the Award of the **Degree of Master of Science** in Biochemistry of Makerere University.

Biryomumaisho Justus Murokore. (2023). "Aflatoxin Ingestion Assessment in Southwestern Uganda and Ameliorative effects of selected Ugandan Plant Spices on

Experimentally Induced Aflatoxicosis in Rats.” Thesis for the Award of the **Degree of Doctor of Philosophy** of Makerere University (Biochemistry).

Kenneth Ssekataawa. (2022). “Evaluation of nanoparticles and phages as candidate therapeutic agents for carbapenem resistant *Klebsiella pneumoniae* and *Escherichia coli*.” Opponent/ Discussant for the Thesis for the Award of the **Degree of Doctor of Philosophy** of Makerere University.

Okeng Alfred. (2022). “PowerPlex® Fusion 5C 22 autosomal short tandem repeat (STR) allele frequencies database and its forensic statistics for Ugandan population”. Dissertation for the Award of the **Degree of Master of Science** in Molecular Biology and Biotechnology of Makerere University.

Idaroussi Faïda Khadidja. (2022). “*Phytochemical Screening, Antibacterial and Antioxidant activities of Endemic Medicinal Plants used in the Comoros: Euclea mayottensis and Tambourissa comorensis.*” Dissertation for the Award of the **Degree of Master of Science** in Biochemistry of Makerere University.

Aggrey Asimwe. (2022). “*Y-Chromosome Genotyping of the Balamogi, the Bagwere and the Banyole of Eastern Uganda.*” Dissertation for the Award of the Degree of **Master of Science** in Biochemistry of Makerere University.

GRADUATE THESIS EXAMINATION (INTERNAL)

Kirabo Erias. (2025). Prevalence and Factors Associated with Metabolic Syndrome Among Patients with Hypertension at Mbale Regional Referral Hospital Chronic Care Clinic, Eastern Uganda. Dissertation for the Award of the **Master of Medicine (Internal Medicine) Degree** of Busitema University.

Muhamed Mulongo. (2024). *Survival Outcomes and Secondary Transmission of Ebola Among Contacts In Central Uganda, 2022: A Retrospective Study.* Dissertation for the Award of the **Master of Public Health Degree** of Busitema University

Kirya Moses. (2023). *The Prevalence of Biomarkers for Chronic Kidney Disease and The Associated Factors Among Diabetic Patients Attending The Adult Diabetic Clinic In Mbale Regional Referral Hospital- A Cross Sectional Study.* Dissertation for the Award of the **Master of Medicine (Internal Medicine) Degree** of Busitema University

FELLOWSHIPS, RECOGNITIONS AND AWARDS

Award for Busitema University “**Best Innovator of the year for the Polyherbal Tooth paste - Carienil**”, during the 16th graduation ceremony held on 28th November 2025.

Received the Inaugural *Paul Waako's Award* for “*The Most Outstanding Course Coordinator in the Academic Year 2023/2024*” at BUFHS. November 2024.

Ranked among the top 725 (**266**) Scientists in Uganda, Biochemistry Best Scientist in Busitema University and 6th best in Uganda by AD Scientific Index **Rankings 2025**

Named Elsevier’s Global Mendeley Advisor of the Month (April 2020).

Best PhD Thesis Award in Molecular Biology and Biotechnology. Pan African University Institute for Basic Sciences, Technology and Innovation. November, 2019.

Honorary mention and recognition (Most innovative and published staff members at Busitema University 2019). Vice Chancellor’s report during the Busitema University 10th Graduation Ceremony, 3rd October, 2019.

Pan African University - African Union Commission Scholarship tenable at the Institute for Basic Sciences, Technology and Innovation at the Jomo Kenyatta University of Agriculture and Technology, for PhD in Molecular Biology and Biotechnology. November, 2016 to November 2019.

BUFHS, Employee of The Year (Academic Staff Category), December 2016.

Karolinska Institutet Pre-doctoral Placement Award – Swedish Research Council. Karolinska Institutet, Solna, Stockholm- Sweden. June 2016.

Pan African University - African Union Commission Scholarship tenable at the Institute for Basic Sciences, Technology and Innovation at the Jomo Kenyatta University of Agriculture and Technology, for MSc degree. November, 2012 to November, 2014.

Graduate Research Fellowship (Cairo University Research Park, Egypt); April 2014 - May 2014

Government of Uganda Direct Entry Merit University Sponsorship (2008 to 2011) tenable at Makerere University for BSc degree

Nile Basin Initiative 2007: Nile Trans-boundary Environmental School Award, 4th Winner Overall

King's College Budo, Budonian Heart Award for Most Disciplined Student, 2007

Overall Best UCE Candidate; Greater Iganga and Kamuli Districts, January 2006

Students' Sage award by Bukoyo Secondary School, 2005

GRANTS, PROJECTS, FUNDING AWARDS AND SIGNIFICANT CONTRIBUTIONS

Co-PI; Busitema University Natural Products Research and Innovation Centre Funding 2025: "Optimization and Value Addition to Tazcov and Glucotak Herbal Products for Commercialization" 2024-2025 (UGX 1.2Billion \approx USD334,000\$). (Innovation fund from Secretariate for Science, Technology and Innovation - Office of the President; Government of Uganda).

PI; "Formulation and Pre-clinical evaluation of herbal toothpaste/ mouth wash for management of oral diseases", 2023-2024 (500m UGX \approx USD132,000\$), (Innovation fund from Secretariate for Science, Technology and Innovation - Office of the President; Government of Uganda).

2022 - 2025, Together with colleagues, we developed the unique Master of Science in Pharmacology (Drug Discovery and Development tenable at Busitema University Faculty of Health Sciences at the Natural Products Research and Innovation Centre (NaPRiC) in Mbale, Uganda.

2020 - 2024, Together with colleagues, we founded and established the Busitema University Natural Products Research and Innovation Centre (NaPRiC) in Mbale, Uganda.

Co-PI; Enhancing Biodegradable Sanitary Towel Production through Utilization of Seaweed and Banana Pseudo stem Residues: A Value Addition Strategy"; Regional Scholarship and Innovation Fund's (RSIF) Research Award 2021.

SARS-CoV-2 Invitro Studies Project hosted at Uganda Virus Research Institute (UVRI): 2020-2021 (560m UGX \approx USD147,000\$), 2021-2022 (1.4 billion UGX); Presidential Scientific Initiative on Epidemics- PRESIDE through Science, Technology and Innovation - Office of the President; Government of Uganda

Co-PI; Busitema University Natural Products and Drug Research Group (BUNaPReG) Herbal Medicine COVID-19 Study 2020: "Evaluation of the anti-SARS-CoV-2 activity of three selected Ugandan medicinal plants and formulation of herbal product (s) for management of COVID -19", 2020-2021 (450m UGX \approx USD118,000\$), 2021-2022 (2.4 billion UGX \approx USD632,000\$); (Presidential Scientific Initiative on Epidemics- PRESIDE through Ministry of Science, Technology and Innovation - MoSTI; Government of Uganda)

PI Busitema University Research Mentors Group 2020, Competitive Small Research Grant II, UGX 5m (Busitema University Directorate of Graduate Studies, Research and Innovation)

Team leader Busitema University Hand Sanitizer Project 2020; UGX 10.7m (Busitema University -TBIIC), UGX 3.5m (Busitema University Staff Associations) and UGX 32m (Seed Global Health Uganda).

PRESENTATIONS AT CONFERENCES, SYMPOSIA AND SEMINARS

Akurut, E., **Gavamukulya**, Y., Mulindwa, J., Isiagi, M., Galiwango, R., Bbuye, M., Lujumba, I., Kiberu, K., Nabisubi, P., Kebirungi, G., Kambugu, A., Castelnovo, B., Nkurunungi, G., Jjingo, D., Oketch, B., Kateete, D.P., & Mboowa, G. Design of a multi-

epitope vaccine against drug-resistant *mycobacterium tuberculosis* and *mycobacterium bovis* using reverse vaccinology. The Busitema University 3rd Annual Science, Technology and Innovation Symposium (3BUSTIS). 14th - 16th October, 2025. Mbale, Uganda.

Gavamukulya, Y., Maina, E.N., El-Shemy, H.A., Meroka, A.M., Kangogo, G. K., Magoma, G., and Wamunyokoli, F. *Annona muricata* mediated silver nanoparticles exhibit strong anticancer activities against cervical and prostate adenocarcinomas through regulation of *CASP9* and the *CXCL1/CXCR2* genes axis; Virtual 7th All African Congress on Basic and Clinical Pharmacology, 15th - 17th September 2021.

Edwin Shigwenya Madivoli, Patrick Gachoki Kareru, Anthony Ngure Gachanja, Samuel Mutuura Mugo, David Sujee Makhanu , Sammy Indire Wanakai, **Gavamukulya, Y.** Facile Synthesis of Silver Nanoparticles Using *Lantana trifolia* Aqueous Extracts and Their Antibacterial Activity; Virtual 7th All African Congress on Basic and Clinical Pharmacology, 15th - 17th September 2021.

Gavamukulya, Y. (2020). Green Nanobiotechnology: Biosynthesis of *Annona muricata* Silver Nanoparticles and Biochemical Evaluation of their Anticancer Activities on Selected Adenocarcinomas; Natural Products Research Network for Eastern and Central Africa Uganda Chapter (NAPRECA-U). Virtual Research Seminar, September 2020.

Gavamukulya, Y. (2020). Green Nanobiotechnology: Biosynthesis of *Annona muricata* Silver Nanoparticles and Biochemical Evaluation of their Anticancer Activities on Selected Adenocarcinomas; Busitema University Virtual Research Seminar Series. Tuesday, June 02, 2020.

Gavamukulya, Y. (2020). Green Nanobiotechnology: Biosynthesis of *Annona muricata* Silver Nanoparticles and Biochemical Evaluation of their Anticancer Activities on Selected Adenocarcinomas; Biochemistry Seminar Series (Guest Speaker Seminar), Department of Biochemistry and Sports Sciences, College of Natural Sciences (CoNAS), Makerere University, Kampala - Uganda. Thursday, March 12, 2020.

Gavamukulya, Y., Maina, E. N., El-Shemy, H. A., Wamunyokoli, F., and Magoma, G. (2019). Synthesis and Characterization of Nanoparticles from Extracts of Fruits of *Annona muricata*: A green nanobiotechnology approach. Conference paper presentation, Kirinyaga University 3rd International Conference, September 11-13, 2019. Kerugoya, Kirinyaga County, Kenya.

Gavamukulya, Y. (2019). Recent advances in cancer drugs research: A green nanobiotechnology approach. Cancer Seminar 2019; Uganda Cancer Institute, Busitema University Faculty of Health Sciences and Mbale Regional Referral and Teaching hospital. Health Manpower Development Centre, Mbale - Uganda, 18th April 2019

OTHER CONFERENCES, SYMPOSIA AND SEMINARS ATTENDED

The 12th Annual Research Ethics Conference (12th ANREC). 21st - 22nd October 2025. Hotel Africana, Kampala, Uganda.

The Busitema University 3rd Annual Science, Technology and Innovation Symposium (3BUSTIS). 14th - 16th October, 2025. Mbale, Uganda.

The 1st Annual Natural Products Research and Innovation Centre (NaPRiC) Stakeholders' Day and Retreat 2024. June 20, 2024. HMDC, Mbale Uganda. (Chair Organizing Committee).

Uganda National Pathogen Economy Forecasting Workshop. 23rd - 25th May 2022. Hotel Africana, Kampala, Uganda.

Uganda Pathogen Economy Symposium 2022. 12th - 13th May 2022. Imperial Royale Hotel, Kampala, Uganda.

Re-imagining the Natural Products Industry in Africa Conference (RPNIA - 2021). 5th - 7th July 2021. Virtual and Physical at Imperial Royale Hotel Kampala, Uganda.

World Health Summit 2021 Regional Meeting. 28th - 30th June, 2021. Virtual and Physical, Kampala, Uganda.

The Busitema University 1st Annual Science, Technology and Innovation Symposium (1BUSTIS). 24th – 25th June, 2021. Virtual, Busitema University, Uganda.

Natural Products Research Network for Eastern and Central Africa Uganda Chapter (NAPRECA-U). Virtual Research Seminar, September 2020.

Uganda National Conference on Antimicrobial Resistance. 21st – 22nd November 2016; Wash and Wills Hotel, Mbale – Uganda

PARTICIPATIONS, WORKSHOPS AND TRAININGS

Validation meeting for the draft regulatory impact assessment (RIA) report on science, Technology and Innovation for the republic of Uganda, and first consultative meeting for the draft STI Policy and Bill. 27th – 29th April, 2026. Held at Kampala SKYZ Hotel, Kampala, Uganda.

Review and Monitoring of Clinical Trials organized by The Supporting Research Ethics Committees for efficient functionality and national accreditation to **REview clinal Trials** in Uganda and Ethiopia. **Project: 101145783- SECRET**. 25th – 26th September, 2025. Held at BUFHS, Mbale Uganda.

Good Research Regulatory Practice Course (GRRPC) for RECs in Eastern Uganda organized by Uganda National Council for Science and Technology. 9th – 11th December, 2024. Held at Mbale Clinical Research Institute, Mbale Uganda.

2024 AAI Clinical Trial Regulation and Ethics digital Course. February 13 - May 31, 2024. Organized by BIO Ventures for Global Health (BVGH).

Human Subjects Protection Course (HSPC) organized by Uganda National Council for Science and Technology. 28th September – 1st October, 2021. Busitema University Faculty of Health Sciences, Mbale Uganda.

Good Clinical Laboratory Practice (GCLP) Training. 26th – 27th July 2021. Uganda Virus Research Institute, Entebbe, Uganda.

COVID-19 Training for Bio-research Laboratory Staff. 10th – 12th March 2021. Uganda Virus Research Institute, Entebbe, Uganda.

Simulation Medical Education Instructor Course. 9th – 11th December, 2020. Busitema University Simulation Centre.

TRREE training programme in research ethics evaluation training course on "Public Health Research Ethics". TRREE and Clinical Trials Centre, The University of Hong Kong. Date of Completion: 16/04/2020.

NIH Web-based training course on "Protecting Human Research Participants". The National Institutes of Health (NIH) Office of Extramural Research. Date of Completion: 07/20/2018, Certification Number: 2867186.

Training in basic principles in Laboratory Quality Systems and General Laboratory Practices. US Army Medical Research Directorate – Kenya, Department of Emerging and Infectious Diseases. June 2018; Nairobi – Kenya.

Safety training in Blood borne pathogens and infection control, Fire safety and evacuation, hazardous materials and chemical hygiene and General Laboratory safety. US Army Medical Research Directorate – Kenya, Department of Emerging and Infectious Diseases. June 2018; Nairobi – Kenya.

East African Community Workshop to Review EAC Joint Inspection Checklist for University Medical, Dental Schools & Teaching Hospitals. Wednesday 8th – Friday 10th March, 2017; Kenya Medical Practitioners and Dentists Board, Nairobi – Kenya

Grants Writing Workshop. April 2016; Wash and Wills Hotel, Mbale – Uganda.

Curriculum Development Workshop for the M. Med Obstetrics and Gynaecology Program at BUFHS. March 2016; Health Manpower Development Centre, Mbale Regional Referral and Teaching Hospital, Mbale - Uganda

Uganda National Academy of Sciences | Global Fund Uganda Country Coordinating Mechanism, National Constituency Engagement Meeting. 27th October 2015; Mount Elgon Hotel, Mbale - Uganda

Higher Education Institutions Institutional Cooperation Instruments (HEI-ICI) Workshop on Mathematics Education and Working Life Relevance in East Africa. July 31st to August 5th 2014; Pan African University Institute for basic Sciences, Technology and Innovation, Nairobi - Kenya

Workshop on Effective Supervision of Graduate Students at The Pan African University Institute for Basic Sciences, Technology and Innovation. 27th - 28th February 2014; African Institute for Capacity Development Assembly Hall, Nairobi - Kenya

Strategic Meeting on Innovations in Bio-energy for Sustainable Development. Uganda Society of Professional Chemists in Collaboration with Uganda National Council for science and Technology. April 2012; Metropole Hotel, Kampala - Uganda

Training and Implementation of Routine HIV Prevention Strategies, Counseling and Testing in Clinical Settings. *Supported by Global health and HIV/AIDS Initiative Uganda (GHAIND)*. May 2010; Makerere University, Kampala - Uganda

King's College Budo Representative for The Nile Basin Initiative Transboundary Environmental Action Project. 2007; Kampala - Uganda

PROFESSIONAL MEMBERSHIP

Biochemistry and Biotechnology Society of Uganda (BBSU - December 2018 - to date); Busitema University Academic Staff Association (BUASA); American Society for Microbiology (2012 - to Present), Natural Products Research Network for Eastern and Central Africa (NAPRECA) (March 2018 - to Present).

COMMUNITY SERVICE

February 2021 to Date	Vice Chairperson, BUFHS Research and Ethics Committee (BUFHS-REC).
May 2021 – October 2022	UpToDate® Certified Trainer and Busitema University Champion for Better Evidence for Training, Wolters Kluwer.
October 2020 to Date	Member Busoga Muslim Region Professionals and Entrepreneurs Consortium (BMR P&E). Member Education and Skills Development Sector and Health, Water and Sanitization Sectors of the BMR P&E.
2014 to Date	Secretary for Publicity, The Kings College Budo 6B (KCB 6B) Class of 2007 Association.
April 2020 – May 2022	Team leader, Busitema University Hand Sanitizers Project for COVID-19 Emergency Response in Eastern Uganda.
December 2017 – November 2022	Secretary General, Pan African University Alumni Association (PAUAA)
February 2017 to Date	Google Level 7 Local Guide; Mapping the world for easy accessibility
February 2017 to date	Global Mendeley Advisor; Mendeley Reference Management. Institutions trained: PAUSTI/JKUAT (14 th Feb 2017, 20 th September 2018, 22 nd October, 2019); BUFHS (7 th April 2017, 6 th October, 2018); BUFMS (28 th October, 2019); Department of Emerging and Infectious Diseases, United States Army Medical Research Directorate – Kenya (8 th February, 2019); University of Nairobi (27 th June, 2019); International Centre of Insect Physiology and Ecology (icipe) – Nairobi Kenya (13 th November, 2019).

February 2012 to Date

Career Guidance Facilitator; Schools facilitated: Kings' College, Budo, Nakavule College School, Kaliro Vocational Secondary School, Iganga High School, Jinja Progressive Academy, Bupadhengo Day and Boarding Primary School, Good Heart SS, Bukoyo Secondary School.

February 2012 to Date

Secretary for Publicity, The Kirenzi Family

SKILLS AND EXPERTISE

Teaching, Teamwork, Microsoft Office, Strategic Planning, Statistics, Research, Cell culture, Public Speaking, Honesty, Special Leadership Skills, and Creative writing.

INTERESTS / HOBBIES

Music, Reading and writing inspirational work as well as travelling and adventure

ABRIDGED CV OF “FAILURES”

This document would be incomplete without a brief summary of my most outstanding failures. Like many other people, there are times when I fail, but these failures are often invisible, while the successes are visible. Many a time, the successes I attain tend to mask the reality and as such, others who may be going through similar situations fail to relate to the facts and therefore attribute their own failure to themselves, rather than understanding the entire world in context.

Those who are lucky enough to attend some of my public talks (usually at functions and special dedication lectures) get to know some of the complicated situations I have sailed through, but those who are not lucky enough to listen to me never get to know the entire story. I shall make a confession that many a time, all that which I share comes from memory depending on the day and may not be complete in all aspects. This CV of Failures is similarly unlikely to be complete as it has been written from memory and may probably omit a lot of stuff, but it is in an attempt to balance the record and provide some perspective. Whereas I maybe among the first scholars to combine both CVs into one, this idea is not mine but I picked out the inspiration behind such an inclusion. You may find the wonderful original article behind this idea in Nature [here](#).

Degree Programs I did not get into

- 2016 PhD in Molecular Diagnostics, Makerere University and Karolinska Institutet with full funding from the Mak-SIDA Program. Despite the scholarship, the field of research was not in line with my interests and therefore dropped out before full registration.
- 2015 PhD in Biomolecular Technology of Proteins, BioTop Research Group, Vienna, Austria. I was not successful in securing the scholarship.

2012 MSc in Biochemistry, Makerere University. I was admitted but failed to get funding for registration.

MSc in Global Health, London School of Hygiene and Tropical Medicine (LSHTM). I was admitted but failed to secure a scholarship.

2008 Doctor of Medicine, Muhimbili University of Health and Allied Sciences (MUHAS, Tanzania). I failed to secure funding through the Inter University Council for East Africa.

Bachelor of Pharmacy, Makerere University.

MBChB, Makerere University.

MBChB, Mbarara University of Science and Technology.

BSc. Telecommunications Engineering, Makerere University.

Scholarships I did not get

The standard *“Thank you for your application for the Scholarship. We were overwhelmed with the applications and the quality of the applicants that applied for the opportunity. We do regret to inform you that your application for the scholarship was unsuccessful. We wish you well in your future endeavors”*, flooded my mails and lost track of how many I applied for. The following however remain outstanding:

2014, 2015 Pan African University (PAU) Scholarship for a PhD in Molecular Biology and Biotechnology. As you may have noticed already, I registered for my PhD at PAU after being successful on my third attempt! Just never give up especially if you are chasing something that you are interested in.

2012 Islamic Development Bank Scholarship for MSc in Biochemistry

Centre for Frontiers of Knowledge (CFK) Scholarship for MSc at Makerere University. Of the hundreds who applied, I am yet to meet one who won the scholarship!!!

2008 Inter University Council of East Africa (IUCEA) Scholarship for Doctor of Medicine Course

Algerian Government Scholarship for B. Pharm in Algeria. My name was literally removed from the list of interviewees as I entered the interview room at the Uganda Ministry of Education and Sports Board Room, at Development House, Kampala.

Fellowships and Awards I did not get

2018 Africa-ai-Japan Innovations Grant Award for my PhD to a tune of 10,000\$.
African Doctoral Academy Early Doctoral Program Fellowship 2019

2012 BTC - Belgium Government Environmental Innovations Research Grant

2010 iSFIT 2010
BUSS (Biology Undergraduate Summer School), ETH, Zurich, Switzerland

Paper rejections from academic journals

This list does not include upfront rejections that were made at the editorial assessment stage before peer review, as these may over crowd the little space I have. Only those that went through the entire peer review cycle are listed.

2022 to Date I lost track of the journals' list!

2021 Technologies in Cancer Research and Treatment,

2020 BMC Complementary and Alternative Therapies,

2019 Nano Today, PloS One, BMC Infectious Diseases, Nature Cancer, Oncogene

- 2018 Alexandria Journal of Medicine, International Journal of Paediatrics and Adolescent Health
- 2017 African Journal of Reproductive Health
- 2015 Free Radical Biology and Medicine, Asian Pacific Journal of Tropical Medicine

Jobs I did not get:

This part of the list is endless. I honestly lost track of where I made applications to. Nevertheless, some outstanding places where I almost got recruited following interviews (in some instances) include the following:

- 2012 - 2013 Research Assistantship at The Presidential Initiative on Banana Industrial Development (PIBID); Got an MSc scholarship before I would be taken up officially and left.
- 2012 Biodiversity Officer, Total E& P Uganda Ltd. Got rejected after final interviews.
- 2012 Oil Exploration Scientist, Baker Hughes International; Never heard anything back.
- 2011 - 2012 Teaching Assistant at Makerere University, Department of Biochemistry and Sports Science; Got rejected when the University policy on Teaching Assistants changed.

2011 Graduate Level Tax Assistant, Price Water House Coopers (PwC) Audit Firm; Got rejected after final interviews.

Schools I was not admitted into

2002 Kiira College Butiki; With 8 aggregates, I did not perform well enough in my PLE to their standards.

2002 Busoga College Mwiri; With 8 aggregates, I did not perform well enough in my PLE to their standards.

Games I failed to perfect and get interested in

Football

Meta Failures

Never mind, with time, I shall refine them into a presentable format...

Summary of both my Successes and Failures:

NO words can describe how much I've learned from my experiences, Especially the failures...

REFEREES

a) Academic and Professional Referees:

1. Prof Paul Waako
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E-mail: gjwandabwa@yahoo.com

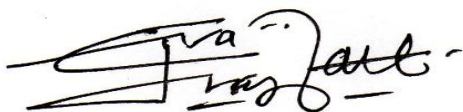
3. Prof Fred Wamunyokoli
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University Institute for Basic Sciences, Technology and Innovation.
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4. Prof Esther NM Maina
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b) Non-Academic Referee:

Arch. Nyanzi Abdul-Wahab, FRIBA, MUSA
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Email: awnyanzi@yahoo.com

Signed under my hand and name, on May 14, 2026 at Mbale Uganda.



ASSOC. PROF. GAVAMUKULYA Yahaya, Ph.D.