

1. PERSONAL DETAILS

NAMES: **PROF. NTALE MUHAMMAD**

DESIGNATION: **Professor of Chemistry, Department of Chemistry, School of Physical Sciences, College of Natural Sciences, Makerere University, Kampala Uganda.**

NATIONALITY: Ugandan

DATE OF BIRTH: 14th August 1968

MARITAL STATUS: Married with children

RELIGION: MOSLEM

PROFESSION: Chemist

AREA OF SPECIALISATION: Analytical/ Environmental Chemistry

POSTAL ADDRESS: Makerere University, Department of Chemistry, P. O Box 7062, Kampala, Telephone: +256 392 967 223 (mobile), Email: **muhammad.ntale@ mak.ac.ug;** **muhntale@gmail.com.**
<https://orcid.org/0000-0003-0174-803X>

LANGUAGES: English (Spoken – excellent; Written – excellent; Reading – excellent).
German (Spoken – fairly well; Written – good; Reading – good).
Luganda (Spoken – Excellent; Written – excellent; Reading – excellent).

2. EDUCATIONAL PROFILE

- Doctor of Philosophy (Analytical Chemistry), through a sandwich programme between Makerere University and Karolinska Institute (Sweden), 2009.
- Master of Science (Analytical Chemistry), Makerere University, 1997.
- Postgraduate Diploma in Education, Makerere University, 1999.
- Bachelor of Science (Analytical Chemistry; 3.1.1 option), Second Class, Upper Division, Makerere University, 1993.

3. KEY QUALIFICATIONS AND COMPETENCES

- **Specialization**
Analytical and Environmental Chemistry.
- **Teaching and Research**

Teaching (University level: BSc; MSc; PhD students and research in the following areas:

1. Analytical chemistry and environmental chemistry.
2. Supervised **18** Master of Science students and **6** PhD students to completion.
3. Supervised over **40** undergraduate student projects.

4. Published **50** papers; **2** book chapters and **1** book.
5. Resource person in several short-courses for professionals and graduate students.
 - ***Special skills and competencies***
 1. Familiar with the policies, laws and regulations that directly or indirectly relate to university administrative structure at Department, School and College level.
 2. Proposal writing, report writing editing and publishing.
 3. Data collection, collation, analysis and reporting.
 4. Planning and organizing workshops, conferences, meetings, training activities and activity scheduling.
 5. Research project planning, coordination, monitoring and evaluation.
 6. Capacity building in local and international research projects, networking and partnerships-building between scientist and decision makers.
 7. IT competent.
 8. Mentorship.
 9. Team work: Worked often with multidisciplinary teams comprising basic scientists, engineers, social scientists, medical practitioners as well as with decision/policy makers, private, public and non-governmental organizations.
 - ***Leadership Roles***
 1. Dean, School of Physical Sciences, College of Natural Sciences, Makerere University; 2017 to 2022.
 2. Ag. Deputy Principal, College of Natural Sciences, Makerere University, September – November, 2018.
 3. Member of Makerere University Senate, 2017 to 2022.
 4. Head, Department of Chemistry, Makerere University; 2008 to 2016.
 5. Member of the Makerere University College of Natural Sciences' Academic Board, 2017 to 2022.
 6. Chairman of the School of Physical Sciences' Academic Board 2017 to 2022.

4. PROFESSIONAL POSITIONS, RESPONSIBILITIES AND ACHIEVEMENTS

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| • July, 2021 | Professor, Department of Chemistry, Makerere University |
| • 2014 –2021 | Assoc. Professor, Dept of Chemistry, Makerere University |
| • 2011 – 2014 | Senior Lecturer, Dept of Chemistry, Makerere University |
| • 2008 - 2015 | Head of Department of Chemistry, Makerere University |
| • 1999 – 2010 | Lecturer, Department of Chemistry, Makerere University |
| • 1995– 1999 | Assistant Lecturer, Dept of Chemistry, Makerere University |
| • 1995 (March) | Teaching Assistant, Dept of Chemistry, Makerere University |
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5. COURSES AND TRAINING ATTENDED

- Induction workshop for Principals, Deputy Principals, Deans, Directors and Heads of departments, Makerere University, March, 2014.
- Worked as a Research Associate at the Department of Clinical Pharmacy, University of California, San Francisco, USA (February, March, 2013).
- Postdoctoral training at the Division of Clinical Pharmacology, Department of Laboratory

Medicine, Karolinska Institute, Sweden: August -October, 2012.

- Postdoctoral training at the Division of Clinical Pharmacology, Department of Laboratory Medicine, Karolinska Institute, Sweden: August/September, 2010.
- Attended a GC-MS workshop in Nairobi, Kenya (October 2010) – supported by Shimadzu /Estec, Kenya.
- Attended and made a poster presentation at the 10th Congress of Therapeutic Drug Monitoring held in NICE, France (September, 2007).
- Participated in the curriculum development and pedagogy workshop, August/September, 2006: “Teacher in Higher Education: Role and Pedagogy” under the quality assurance framework for Makerere University.
- Attended the 5th Laboratory Manager’s Workshop for East and Southern Africa, Regency Hotel, Kampala, December, 2006.
- Trained at Department of Clinical Pharmacology, Karolinska Institute, Sweden, in **Analytical method development and validation** January-May, 2006.
- Trained at the Department of Laboratory Medicine, Karolinska Institute, Sweden, in **Analytical techniques for detecting/measuring drugs and their metabolite concentrations in biological samples**, February-June, 2004.
- Trained at the Department of Pharmacy, Muhimbili University College of Health Sciences, Tanzania, in **Drug analytical techniques**, September/October, 2003.
- Attended a workshop on pharmacogenetics of drug metabolism, Nairobi, Kenya August, 2003.
- Trained in Advanced Gender Research Methodology, Held at the Department of Women and Gender Studies, Makerere University, July, 2003.
- Trained in statistical methods and computer applications in research, held at the Institute of statistics and Applied Economics, Makerere University, April/May 2002.
- Attended and presented a paper entitled **Complexation equilibria between lead with carbonate and bicarbonate anions** at the Kenya Chemical Society Conference held in Moi University, Kenya, 1996.
- Trained at Kenyatta University, Nairobi, in **Polarographic/Voltammetric techniques for analysis of metal ions in water systems**, July/August, 1993.

6. OTHER EXPERIENCE

- **Organizer/convener of a conference/seminar/workshop**
1. I was a facilitator at the Bioanalytical investigations workshop (19th to 20th April 2010, Department of Pharmacology & Therapeutics, Makerere University, Uganda). Theoretical and practical aspects. Supported by WHO and GTZ.
 2. I was a facilitator at the Pharmacokinetics/Pharmacodynamics workshop (24th October, 2011 to 6th November, 2011, Department of Pharmacology & Therapeutics, Makerere University, Uganda). Theoretical and practical aspects. Supported by Karolinska Institute, Sweden.

7. SERVICE TO UNIVERSITY AND COMMUNITY

- **Curriculum development**
1. From 1999 to 2000, fully participated in the development of the Bachelor of Science External Degree programme currently hosted by the Department of Distance Education, Makerere

University.

2. 2008, participated in the development of the Bachelor of Science with Education curriculum (Chemistry component) for Busitema University.
- **Membership to university standing committees**
1. 1999 – 2007; Secretary to the Departmental appointments and promotions committee, finance committee and the departmental examiners' committee.
 2. As a Head of Department for eight years, I was virtually a member of all departmental committees and also a member of several committees at both School and College Level (2008-2015).
 3. As a Dean, I was a member of the Makerere University Senate.
 4. 2020 to 2022; Chairperson of the selection and recruitment committee for the Mastercard foundation scholarship program.
 5. 2017/2019; College Representative to the Senate Academic policies and appeals committee.
 6. 2019 – to 2022; Senate representative to the Makerere University Ceremonies Committee.
 7. 2015 – 2019; Makerere University Academic Staff Association Representative to Staff Tribunal.
- **To the community**
1. Moderator for both UCE and UACE papers at the Uganda National Examinations Board, for 20 years.
 2. Chairperson, Board of Directors, Kinaawa High Schools (2020-todate).
 3. Chairperson, Board of Directors for Kyaddondo Secondary School (2015 to date).
 4. Chairperson, Board of Governors, Kampala High School (2018 – to date).

8. COMPLETED PROJECTS/GRANTS

- 1) Development of Termite Saliva as a Potential Stabilization Material for Road Base and Sub-base Soil Layers. Supported by the CROSSROADS CHALLENGE FUND. Co-PI and project based at CEDAT worth **UGX 100,000,000/=**.
- 2) Environmental restoration of polluted and degraded habitats of Queen Elizabeth National Park in Kasese District, Western Uganda. Research sponsored by the Swedish International Development Agency (SIDA). Co-PI and project based at CoNAS worth **1, 500,000 SEK**.
- 3) As chairperson, Selection & Recruitment committee of Mastercard Foundation Scholarship Program, together with other colleagues in the Project Implementation Team, we were overseeing a **21 million USD** project run by Makerere University.

9. STUDENT SUPERVISION/GRADUATE RESEARCH UNDERTAKEN

- **MSc students who have completed**
1. Matsiko Julius (MSc, Chemistry, Makerere, 2011). Dissertation title: Effect of Tororo municipal effluent on the water quality of River Aturukuku, Eastern Uganda.
 2. Byamugisha Tarsisius (MSc, Chemistry, Makerere, 2011). Dissertation title: Quantitative determination of artemisinin yield in artemisia annua l. plants cultivated in selected parts of Uganda.
 3. Egor Moses (MSc, Chemistry, Makerere, 2011). Dissertation title: Heavy metal and nutrient loading of River Rwizi caused by effluents from Mbarara Municipality, western Uganda.

4. Turyahikayo Enid (MSc, Environmental Science, Makerere, 2012). Dissertation title: Assessing the levels of pesticides residues in livestock products and water around Lake Mburu National Park, South Western Uganda.
 5. Bamukyaye Sam (MSc, Chemistry, Makerere, 2014). Dissertation title: The effectiveness and kinetics of removal of chromium (VI) from leather tannery wastes using egg shells and fish scales.
 6. Nantaba Florence (MSc, Chemistry, Makerere, 2014). Dissertation title: Development of a field-adapted kit for screening methanol in alcoholic beverages.
 7. Owino John (MSc, Chemistry, Makerere, 2015). Dissertation title: Determination of levels of selected antibiotics in the waters of the Nakivubo Channel, Kampala, Uganda.
 8. Kigozi Moses (MSc, Chemistry, Makerere, 2015). Dissertation title: Production and characterization of liquid fuel from mixed plastic wastes using catalytic pyrolysis.
 9. Kaggwa Bruhan. (MSc, Makerere University, 2015). Dissertation title: Determination of the levels of chloramphenicol residues in chicken products sold in Kampala, Uganda.
 10. Matovu Francis (MSc, Chemistry, Makerere University, 2016). Dissertation title: Assesment of the anti-hypoglycemic activity of selected plants used in traditional medicine in Uganda and structural elucidation of the compounds in the most active extract.
 11. Lilly Ladu (MSc Chemistry, Makerere University, 2018). Dissertation title: Seasonal variation of heavy metal and nutrient loading in water from Bahr el Jebel River, Juba, South Sudan.
 12. Mwesigwa Cleopas Bama (MSc Chemistry, Makerere University, 2018). Dissertation title: Determination of levels of selected nutrients and toxins in fruits of lagenaria sphaerica from Kabale District.
 13. Buzibye Allan (MSc, Pharmacology, Makerere University, 2018). Dissertation title: Development and validation of an HPLC-UV multiplex assay for monitoring antiretrovirals in clinical samples of adult Uganda patients.
 14. Tebetyo Zakia (MSc Chemistry, Makerere University, 2018). Dissertation title: Efficacy of selected chemical and biological binders in reducing aflatoxin concentrations in poultry feeds.
 15. Ddumba Keneth (MSc Chemistry, Makerere University, 2021). Dissertation title: Isolation and identification of adulterants in aphrodisiac herbal medicines sold in Uganda.
 16. Kyobutungi Peace (MSc Chemistry, Makerere University, 2021). Dissertation title: Assay of selected food supplements labelled to contain vitamin A and Iron in Kampala- Uganda.
 17. Munanura Edison Ireeta (MSc Chemistry, Makerere University, 2021). Dissertation title: Assessing Enrofloxacin use practices and residue levels of Enrofloxacin/ciprofloxacin in breast and liver tissues of broiler chicken sold in selected markets in Kampala capital city- Uganda.
 18. Usman Mariam Onize (MSc Chemistry, Makerere University, 2023). Dissertation title: Synthesis and characterization of silver/calcium oxide-activated carbon Nano-composite for the removal of phosphate from wastewater.
- **PhD students who have completed**
 1. Joyce Bukirwa (**PhD**, Nkumba University, 2012).
 2. Ssenku Jamilu (PhD, Makerere University, 2015). Thesis title: Environmental restoration of polluted and degraded habitats in Queen Elisabeth Conservation Area, in Kasese District, Western Uganda.
 3. Odongo Charles (PhD, Makerere University, 2017). Thesis title: Intermittent preventive treatment of malaria with sulfadoxine-pyrimethamine: pharmacokinetic analysis of

disposition in second and third trimesters of gestation.

4. Ntambi Emmanuel (PhD, Mbarara University, 2018). Thesis title: Heavy metal status and agronomic value of industrial biosolid wastes.
 5. Nnamuyomba Proscovia (PhD, Makerere University, 2020). Thesis title: Effluent and run-off pollutant contaminants in marketed cat-fish (*clariaswernerii*) and silver fish (*Rasteneobola argentea*) caught from major water bodies in Uganda.
 6. Ezeonwumelu Joseph (PhD, Mbarara University, 2021). Thesis title: Evaluation of biopharmaceutical values of *Bidens pilosa*, *Ageratum conyzoides* and *Ocimum suave* in management of oral lesions of HIV/AIDS patients.
- ***On-going MSc and PhD students***
1. Kasumba Wilson (MSc Chemistry, Makerere University).
 2. Kapanga Muamba Pachris (MSc Chemistry, Makerere University).
 3. Ismaila Kubrah (MSc Chemistry, Makerere University).

TEACHING AND COURSES TAUGHT AT UNIVERSITY LEVEL

- Basic inorganic chemistry (undergraduates).
- Environmental chemistry (undergraduates).
- Elements of analytical chemistry (undergraduates).
- Advanced analytical chemistry (undergraduates).
- Proposal writing (graduate students).
- Method development and validation (graduate students).
- Special topics in analytical chemistry (graduate students)
- Budgeting and accountability in research (graduate students)

10. OUTREACH AND CONSULTATION SERVICES

1. Team member of the Technical committee for the Uganda National Bureau of Standards for three years (2000-2002).
2. Team member, evaluation committee for procurement of scientific equipment in the Ministry of Internal Affairs for two years (2004-2005).
3. Team member, Environmental audit of Afroplast Enterprises Ltd (2012).
4. Team member, Environmental audit of Igara Growers Tea Factory Ltd (2012).
5. Team member (Analytical Chemist) of Queensland & Leeds consulting Engineers.

11. EXTERNAL EXAMINATION

- ***Examination (external)***
1. External examiner (Chemistry) for Mbarara University of Science and Technology 2008/2009, 2009/2010, 2010/2011.
 2. External examiner (Chemistry) for Kampala International University, 2010/2011, 2014/2015.
 3. External examiner (Chemistry) for Busitema University, 2011/2012, 2012/2013 and 2013/2014.
 4. External examiner (Chemistry) for Kyambogo University, 2014/2015; 2015/2016; 2016/2017.
 5. External examiner (Chemistry) for Gulu University, 2015/2016; 2016/2017; 2017/2018.

12. EXAMINATION OF THESES/DISSERTATIONS

- *Examination (internal)*

1. MSc dissertation for OGWENG GEORGE: Characterization of anthocyanins from the flowers of *Abrus canescens* bak. and leaves of *Synadenium grantii* Hook.
2. MSc dissertation for VUDRIKO PATRICK: Quality of Sulfadoxine/Pyrimethamine tablets sold in drug shops in Arua District-Uganda.
3. Med. (Science) dissertation for KYAKULAGA ROBERT: Exploring the role of computer simulations in students' learning of chemistry concepts: a case study of Bishop's secondary school, Mukono.
4. MSc thesis for MUHWEZI GODFREY: Determination of selected heavy metals in milk from some dairy farms in Wakiso District.
5. MSc thesis for KARUME IBRAHIM: C-C cross-coupling reactions catalysed by palladium nanoparticles stabilized by and supported on polyoxometalates.
6. MSc Thesis for SIBOMANA JEAN-BOSCO: The speciation of selected heavy metals in sediments and surface water flowing through volcanic rocks in Musanze District, Rwanda.
7. MSc Thesis for NALUMANSI IRENE "The effect of various reductants on spectral characteristics of reduced phosphopolyoxmolybdate anion and its application to orthophosphate anion quantification in selected waters of Uganda".
8. MSc Thesis for MUKASA PAUL: 'Assessment of levels of Dichlorodiphenyltrichloroethane and its metabolites in soil and selected food crops from Apac and Oyam Districts in Northern Uganda'.
9. PhD thesis for OGWANG PATRICK: 'Evaluation of *Artemisia annua* Linnaeus for malaria prophylaxis.
10. MSc Thesis for OKOT DAVID FRED: Characterization of anthocyanins from selected wild edible fruits from North-Eastern Uganda.
11. MSc dissertation for ROBERT KASOOTA TUSIIME, Makerere University, 2015. Dissertation title: 'Characterisation of heavy metals in petroleum drilling solid wastes and recommended disposal options in the Albertine Graben – Western Uganda'.
12. PhD Thesis for GODFREY S. BBOSA, Makerere University, 2015. Thesis title: "Chronic alcohol exposure by HIV- infected patients on antiretroviral drugs regimen (dT4/3TC/NVP) in Uganda: a study of therapeutic window and their response".
13. PhD Thesis for Solomon Yiga, Makerere University 2020. Thesis Title: Synthesis, Catalysis and nitrosyl Derivatives of Iron (II) Complexes bearing pentadentate polypyridyl ligands.
14. MSc dissertation for Sarah Namara, Makerere University 2020. Dissertation title: "Essential and Potentially Toxic Elements in Selected Antimalarial Plants used by Communities Around Kilembe Copper mines, Kasese District".
15. PhD Thesis for Florence Nantaba, Makerere University 2021. Thesis title: Selected emerging organic chemical pollutants in water and sediments of Lake Victoria, Uganda.

- *Examination (external)*

1. Nalumansi Irene; **Mbarara University of Science and Technology**. Thesis title: Spectrophotometric method development for orthophosphate anion quantification in selected water systems.
2. PhD Thesis for Bamuwamy Michael; **Kyambogo University**. Thesis title: 'Health

- risk associated heavy metal exposure in street roasted and vended *meats*, drinking water and black tea in Kampala City’.
3. PhD Thesis for Hatoho Juliet; **Kyambogo University**. Thesis title: ‘Chemical composition of oil from traditional and improved cultivars of Groundnut (*Arachis hypogea*) and oyster nut (*Telfairia pedata*)’.
 4. MSc dissertation for RICHARD TWINAMASIKO (**Kampala International University**). Assessment of heavy metal concentrations in food crops from PECE wetland in Gulu Township, Northern Uganda’.
 5. PhD thesis for DUNCAN SESAAZI (**Mbarara University of Science and Technology**): “Characterization of biologically active constituents of stemphylium solani, a fungal endophyte of morinda citrifolia L. (noni)”.
 6. MSc dissertation for CRANMER LUBANGA (**Mbarara University of Science and Technology**): “Adsorption study of removal of chromium (VI) from aqueous solution using jackfruit (*Artocarpus heterophlus*) seeds”
 7. MSc dissertation for WALTER OJOK (**Mbarara University of Science and Technology**): “Evaluation of spatial and temporal variation in water quality of River Rwizi using multivariate statistical techniques”.
 8. MSc dissertation for HERBERT KARIITU MUGUME (**Mbarara University of Science and Technology**): “Quantification of heavy metal contaminants in the commercially milled maize flour for human consumption in Mbarara Municipality, Western Uganda”.
 9. MSc dissertation for CAROLINE NAKIGULI (**Mbarara University of Science and Technology**, 2015). Dissertation title: “Phytoremediation of Chromate copper Arsenate from contaminated soil amended using sewage sludge biosolid using Maize (*Zea mays* L.”
 10. MSc Thesis for FREDRICK MURITHII MUGO (**University of Nairobi**): ‘Total elements’ speciation and soil fertility analysis around Mt. Kenya’.
 11. MSc dissertation for SOLOMON MATONGO. **University of Kwazul Natal, South Africa** 2014, Dissertation title: ‘Occurrence of selected pharmaceuticals in key water sources of Kwazul-Natal, South Africa’.
 12. MSc dissertation for MUSTAPHA SHEHU WURNO. **IUIU**, 2015. Dissertation title: ‘Utilization, phytochemical and antibacterial activity of medicinal plants used in the management of HIV/AIDS opportunistic infections in Njeru sub-county, Buikwe District’.
 13. MSc dissertation for IBRAHIM MAS’UD, **IUIU**, 2015. Dissertation title: ‘The challenges of adopting biogas technology as an alternative energy source in Chema and Tegeres sub-counties, Kapchorwa District’.
 14. MSc dissertation for MOHAMMED MURTALA ABUBAKAR, **IUIU**, 2015. Dissertation title: ‘Effect of industrial waste discharge on phytoplankton biodiversity and composition of the water in Kirinya Bay of Lake Victoria’.
 15. MSc dissertation for ABUBAKAR NAGWAGGO, **IUIU**, 2015. Dissertation title: ‘Effect of fish handling practices on fish quality: a case study of Kiyindi and Busaana landing sites in Buikwe District, Uganda’.
 16. MSc dissertation for SULAIMAN ABUBAKAR AMINU, **IUIU**, 2015. Dissertation title: ‘A comparative study of the effect of pesticide application on the water and soil quality in the two irrigation schemes in Eastern Uganda’.
 17. MSc dissertation for SHABANI HASSAN RAMATHANI, **IUIU**, 2015. Dissertation title: ‘Generation and quantification of electronic waste in selected dumping sites in urban

district of Zanzibar’.

18. MSc dissertation for AHMAD ALKANCINASIRU, IUIU, 2015. Dissertation title: ‘Wood Ash aided phytoremediation of pyrite soils by Eucalyptus Grandis W. Hill ex maid seedlings.

13. MEMBERSHIP IN LEARNED SOCIETIES

1. Member of the International Association of Therapeutic Drug Monitoring and Clinical Toxicology, 2007-2009.
2. Member of the Uganda Pharmacological Society.
3. Member of Uganda Association for Impact Assessment (2012-2013).
4. Registered environmental practitioner (Environmental auditor), 2013, certificate No. CC/EA/028/13 and 2013-2014.
5. Chairperson, Electoral Commission for the Makerere University Academic Staff Association (2017 – 2019).

14. ACADEMIC PUBLICATIONS

1. Usman, Godwin Aturagaba, **Muhammad Ntale** and George William Nyakairu. A review of adsorption techniques for removal of phosphates from wastewater Mariam Onize. **Water Science & Technology Vol. 86 No. 12, 3113; doi: 10.2166/wst.2022.382.**
2. Hindum Lanyero, Moses Ocan, Celestino Obua, Cecilia Stålsby Lundborg, Oscar Kibirango, Musa K Wakabi, Joan N Kalyango, Jaran Eriksen, Sarah Nanzigu, Anton Pohanka, **Muhammad Ntale**. A Qualitative LC-MS/MS Method for Simultaneous Screening of 15 commonly used Antibiotics from dried Blood and Urine spots. **International Journal of PharmTech Research, 2021, Vol.14, No.02, pp 288-297.**
3. Kenneth Dumba, Wiberforce Kwiringira, Jane Namukobe, **Muhammad Ntale**. Identification and analysis of adulterants in aphrodisiac medicines sold by private herbal clinics, pharmacies and herbal drug shops in Kampala, Uganda. **East and Central African Journal of Pharmaceutical Sciences 2021, 24, 3-14.**
4. Emmanuel Ntambi, **Muhammad Ntale**, John Stephen Tenywa. Heavy metal bioaccumulation by maize grown on a Ferralsol amended with urban-based biosolid wastes. **Journal of Agricultural Chemistry and Environment, 2021, 10, 184-195.**
5. Aziz Kimera Mukota, Melanie Flore Kamini Gondam, Julie Judith Takadong Tsafack, James Sasanya, Wim Reybroeck, **Muhammad Ntale**, Steven Allan Nyanzi and Emmanuel Tebandeke. Primary validation of Charm II tests for the detection of antimicrobial residues in a range of aquaculture fish. **BMC Chemistry, 2020; https://doi.org/10.1186/s13065-020-00684-4.**
6. Emmanuel Ntambi, John Stephen Tenywa, **Muhammad Ntale**. Sorption and Desorption Phenomena of Urban Biowaste-Based Heavy Metals by a Ferralsol. **Journal of Agricultural Chemistry and Environment, 2020, 9, 13-26.**
7. Ezeonwumelu, J.O.C., **Ntale, M.**, Ogbonnia, S.O., Agwu, E., Tanayen, J.K., Adedeji, A.A., Okonkwo, C.O., Akunne, A.A., Ebosie, J.C. and Byarugaba, F. (2018) Analgesic Appraisal of Bidens pilosa (Asteraceae) Leaf Extracts Used in Management of Oral Lesion Pain in HIV/AIDS Patients in Rodents. **Pharmacology & Pharmacy, 9, 175-192.** <https://doi.org/10.4236/pp.2018.96014>.

8. Ezeonwumelu, J.O.C., **Ntale, M.**, Ogbonnia, S.O., Agwu, E., Tanayen, J.K., Kasozi, K.I., Okonkwo, C.O., Shodunke, A., Akunne, A.A., Dafiewhare, O.E., Ebosie, J.C. and Byarugaba, F. (2017). In vitro Antibacterial Efficacy of *Bidens pilosa*, *Ageratum conyzoides* and *Ocimum suave* Extracts against HIV/AIDS Patients' Oral Bacteria in South-Western Uganda. **Pharmacology & Pharmacy, 8, 306-323.**
9. Ezeonwumelu, J.O.C., **Ntale, M.**, Ogbonnia, S.O., Agwu, E., Tanayen, J.K., Kasozi K. I., Akunne, A.A., Okonkwo C.O. and Byarugaba, F. (2017). Efficacy of commercially used antibacterial agents against oral bacteria associated with HIV/AIDS patients in South Western Uganda. **British Journal of Pharmaceutical Research, 16(5): 1-13, 2017.**
10. Ezeonwumelu, J.O.C., **Ntale, M.**, Kasozi K. I., Ogbonnia, S.O., Tanayen, J.K., Agwu, E., Okonkwo C.O. Akunne, A.A., and Byarugaba, F. (2016). Resistance, minimum inhibitory and bactericidal concentration profiles of oral bacteria from HIV/AIDS patients in South Western Uganda. **British Journal of Medicine & Medical Research. 18 (11): 1-14, 2016.**
11. Charles O. Odongo, Kuteesa R. Bisaso, **Muhammad Ntale**, Gordon Odia, Francis W. Ojara, Josaphat Byamugisha, Jackson K. Mukonzo, Celestino Obua. Trimester-Specific Population Pharmacokinetics and Other Correlates of Variability in Sulphadoxine–Pyrimethamine Disposition among Ugandan Pregnant Women. **Drugs in R&D. 2015. DOI: 10.1007/s40268-015-0110-z.**
12. A.V. Silva, N. Mwebaza, **M. Ntale**, L.L. Gustafsson, A. Pohanka. A fast and sensitive method for quantifying lumefantrine and desbutyl-lumefantrine using LC–MS/MS. **Journal of Chromatography B, 1004 (2015) 60–66.**
13. Abson Richard Asiima, Jolocam Mbabazi, Emmanuel Tebandeke and **Muhammad Ntale**. Trace metal and nutrient constitution of rain water and sediment/sludge harvested in various storage tanks from galvanised iron roof tops in Kampala City, Uganda. **Carribbean Journal of Science and Technology, 2015, Volume 3, 718-730.**
14. Proscovia Nnamuyomba, Jolocam Mbabazi and **Muhammad Ntale**. Trace Elements in Marketed *Rastreneobola Argentea* and *Clarias Wernerii* Caught from Selected Aquatic Ecosystems in Uganda. **International Journal of Current Trends in Engineering & Technology. Volume: I, Issue: III (Mar. - Apr. 2015). Pg 76-82.**
15. Irene Nalumansi, Jolocam Mbabazi, Henry Ssekaalo and **Muhammad Ntale**. Effect of various reductants on the spectral characteristics of the reduced phosphopolyoxomolybdate anion, and its application to the orthophosphate anion quantification in selected Uganda waters. **International journal of current trends in engineering and technology; Volume I, Issue II (Jan.-Feb. 2015) pg 59-66.**
16. Z. Mukasa-Tebandeke, P. J. M. Ssebuwufu, S. A. Nyanzi, A. Schumann, **M. Ntale**, G. W. Nyakairu, F. Lugolobi. Distinguishing Kaolinites and Smectite Clays from Central and Eastern Uganda Using Acidity, pH, Colour and Composition. **American Journal of Analytical Chemistry, 2015, 6, 58-70.**
17. Z. Mukasa-Tebandeke, P. J. M. Ssebuwufu, S. A. Nyanzi, A. Schumann, G. W. A. Nyakairu, **M. Ntale**, F. Lugolobi. The Elemental, Mineralogical, IR, DTA and XRD Analyses Characterized Clays and Clay Minerals of Central and Eastern Uganda. **Advances in Materials Physics and Chemistry, 2015, 5, 67-86.**
18. Godfrey S. Bbosa, Norah Mwebaza, Aloysius Lubega, Nathan Musisi, David B. Kyegombe and **Muhammad Ntale**. Antiplasmodial activity of leaf extracts of

- Zanthoxylum chalybeum* Engl. **British Journal of Pharmaceutical Research** 4(6): 705-713, 2014.
19. Godfrey S. Bbosa, Norah Mwebaza, Hohn Odda, David B. Kyegombe and **Muhammad Ntale**. Antibiotics/antibacterial drug use, their marketing and promotion during the post-antibiotic golden age and their role in emergence of bacterial resistance. **Health, Vol. 6, No. 5, 410-425 (2014)**.
 20. Moses Egor, Jolocam Mbabazi and **Muhammad Ntale**. Heavy metal and nutrient loading of River Rwizi by effluents from Mbarara Municipality, Western Uganda. **International Journal of Chemistry and Materials Research, 2014, 2(5): 36-47**.
 21. Godfrey S. Bbosa, David B. Kyegombe, William W. Anokbonggo, Jasper Ogwal-Okeng, David Musoke, John Odda, Aloysius Lubega and **Muhammad Ntale**. Chronic ethanol use in alcoholic beverages by HIV-infected patients affects the therapeutic window of stavudine, lamivudine and nevirapine during the 9-month follow-up period: using chronic alcohol-use biomarkers. **J. Basic Clin Physiol Pharmacol 2014; aop; Doi:10.1515/jbcpp.2013-0089**.
 22. Jamilu Edrisa Ssenku, **Muhammad Ntale** and Hannington Oryem-Origa. Physio-chemical characteristics of copper tailings and pyrite soils in Western Uganda: Implication for the phytoremediation. **International Journal of Environmental Monitoring and Analysis. Vol. 2, No. 4, 2014, pp. 191-198**. Doi: 10.11648/j.ijema.20140204.12.
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15. REVIEW OF JOURNAL ARTICLES

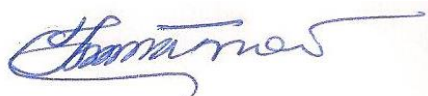
- I have reviewed manuscripts for several international journals.

16. VETTING OF SCIENTIFIC RESEARCH/PUBLICATIONS FOR PURPOSES OF INDIVIDUALS' PROMOTION

1. Nanyonga Sarah, Kyambogo University: Promotion to Senior Lecturer.
2. Mukonzo Jackson, Makerere University: Promotion to Senior Lecturer.
3. Birungi Grace, Mbarara University of Science & Technology: Promotion to Associate Professor.
4. Kasozi Gabriel, Makerere University: Promotion to Senior Lecturer.
5. Kasoma Sandra, Makerere University: Promotion to Senior Lecturer.
6. Ssebugere Patrick, Makerere University: Promotion to Senior Lecturer.
7. Justus Masa, Kyambogo University: Promotion to Senior Lecturer.
8. Godfrey Bbosa, Makerere University: Promotion to Senior Lecturer.

17. INNOVATIVENESS

- I was able to set up a modern laboratory suitable for pharmacokinetics and therapeutic drug monitoring, situated in the department of Pharmacology and Therapeutics, College of Health Sciences, Makerere University.



Prof. Ntale Muhammad (PhD)

Department of Chemistry
School of Physical Sciences
College of Natural Sciences
Makerere University