

CURRICULUM VITAE

PERSONAL INFORMATION

Name	Dr. Keno David Kowanga, PhD
Address	Maseno University Department of Chemistry Private Bag, Maseno
Mobile	+254 720 170 612
E-mail	kenokowanga@gmail.com
Date of Birth	2 nd November 1987
Languages	Fluent in English and Swahili
Sex	Male
Marital Status	Married
Nationality	Kenyan

PROFESSIONAL QUALIFICATION

2013 – 2019	Ph.D. Chemistry Advisor: Dr. Joan Munissi	University of Dar es Salaam
2010 – 2012	M.Sc. Chemistry Advisor: Prof. Erastus Gatebe	Jomo Kenyatta University of Agriculture and Technology
2006 – 2009	B.Sc. Analytical Chemistry [First Class Honours]	Jomo Kenyatta University of Agriculture and Technology
2001 – 2004	Kenya Certificate of Secondary Education	St. Mary's Boys' Secondary School, Nyeri
1993 – 2000	Kenya Certificate of Primary Education	Sega Township Primary School

EMPLOYMENT PROFILE:

Mar. 2021 – To Date	Lecturer, Department of Chemistry Duties <ul style="list-style-type: none">To contribute towards the achievement of the Mission and Vision of the University;To contribute effectively to the creation and circulation of knowledge through effective teaching, research and publishing;To enrich the intellectual development of students through interactions and academic counselling in area of specialization;To participate in institution building and extra-curricular activities of department in order to create a rich and vibrant intellectual environment at Maseno University.	Maseno University
Feb. 2020 – Feb. 2021	Lecturer, Pharmacy Department	Kampala International University in Tanzania

Duties:

- Mentor young academicians, teach and supervise undergraduate and diploma students.
- Develop and continually improve the curricular of courses that I teach.
- Research and publish academic articles/books in area of my specialization.
- Advice students and colleagues on appropriate subject matters consistent with my academic background and training.
- Develop a marking scheme for the courses that I teach, carry out progressive assessments, set and mark examinations in the courses that I teach.
- Attend relevant meetings, discuss matters as per the agenda and perform any duties as may be assigned to me by relevant university authorities.

Jan. 2012 – May 2019**Assistant Lecturer, Pharmacy Department****Kampala International University in
Tanzania****Duties:**

- Mentor young academicians, teach and supervise undergraduate and diploma students.
- Develop and continually improve the curricular of courses that I teach.
- Research and publish academic articles/books in area of my specialization.
- Advice students and colleagues on appropriate subject matters consistent with my academic background and training.
- Develop a marking scheme for the courses that I teach, carry out progressive assessments, set and mark examinations in the courses that I teach.
- Attend relevant meetings, discuss matters as per the agenda and perform any duties as may be assigned to me by relevant university authorities.

Jan. 2011 – Dec. 2011**Senior Tutor****Kenya Institute of Development Studies****Duties:**

- Teach and supervise diploma and certificate students.
- Setting and Invigilating CATs and Exams
- Marking CATs, Practicals and Exams

Feb. 2010 – May 2010**Laboratory Technician****Aquatech Industries Limited****Duties**

- Portable water treatment and analysis.
- Waste water treatment and analysis.
- Industrial water treatment and analysis.
- Boiler water, cooling and chillers water treatments/analysis.
- Chemical and Bacteriological water analysis

**GRANTS AND
SCHOLARSHIPS****2014**

National Commission for Science, Technology and Innovation through Science, Technology and Innovations (ST&I) Research Grant NACOSTI/RCD/ST&I 5th Call Ph.D./148 worth Ksh. 1,000,000 towards my proposal entitled “Metabolites from Selected Plant Species and Salt Lake Fungi: Their Antimycobacterial Properties and Biodiesel Feedstock Potential”

2013 – 2019

NAPRECA-DAAD Scholarship; to pursue Ph.D. Chemistry at University of Dar es Salaam Chemistry Department. (Successfully finished and graduated with PhD Chemistry)

2011 Science, Technology and Innovation Research Grant (M.Sc.) awarded by National Council for Science and Technology worth Ksh. 200,000 towards my proposal entitled “Clarification of Turbid River Water and Biosorption of C(II) and Pb(II) using Natural Coagulants: *Maerua subcordata*, *Moringa oleifera* and *Prosopis juliflora*”

2006 – 2009 Government of Kenya Scholarship; to pursue B.Sc. Analytical Chemistry at Jomo Kenyatta University of Agriculture and Technology. (Successfully finished and graduated with B.Sc. Analytical Chemistry {First Class Honours})

RESEARCH DONE

Ph.D. Thesis Metabolites from Selected Plant Species and Salt Lake Fungi: Their Antimycobacterial Properties and Biodiesel Feedstock Potential

M.Sc. Thesis Clarification of Turbid River Water and Biosorption of Aqueous Cu(II) and Pb(II) using Natural Coagulants: *Maerua subcordata*, *Moringa oleifera* and *Prosopis juliflora*.

B.Sc. Research Development of Wood Adhesives based on Cashew Nutshell Liquid (CNSL).

STUDENTS SUPERVISED

David Odhiambo 2 *Influence of Fermentation Duration and Use of Microwave Technology to Deactivate Oxidative Enzymes on Residual Catechins and Plain Clonal Black Tea (Camellia Sinensis) Quality Parameters* **Proposal defended, Lab work and thesis writing**
MSC/SC/00032/021

Mukhalisi Stellah Nelima 1 *Adsorption Thermodynamics and Kinetic of Aqueous Cd(II) And Pb(II) on Modified Tamarind Fruit Pulp Adsorbents* **Proposal defended, Lab work and thesis writing**
MSC/CHE/001/2021

THESIS EXAMINED

Otieno Kevin Yamo 3 *Inhibition of α -amylase and α -glucosidase by alkaloids and phenolics from the stem bark of *Zanthoxylum chalybeum* and *Zanthoxylum gillettii**
MSC/SC/00006/018

Simiyu Simon Magero 2 *Statistical optimization organic fertilizer production from animal waste*
MSC/CHE/001/19

Wamechi Juma Nasambu Edith 1 *Synthesis and characterization of struvite using wastewater and hot spring water for agricultural application*
MSC/CHE/004/21

PUBLICATIONS

- 13 Ochieng O. Anthony, Nasif A. Mohamed, **David K. Kowanga**. Assessment Of Ricinus Communis MI Crude Extracts Towards Urinary Tract Infection Strains With Their Associated Ailments. International Journal of Progressive Sciences and Technologies (IJPSAT) Vol. 34 No. 1 August 2022, pp. 335-352. <https://ijpsat.org/index.php/ijpsat/article/view/4572>
- 12 Joan J.E. Munissi, Stephen S. Nyandoro, **Keno David Kowanga**, James G. Mayeka, Rose J. Masalu, Máté Erdélyi and Erastus G. Gatebe. New Prenylated Flavones and Nor-Sesquiterpenoid from *Erythrina Saculeuxii* (Fabaceae) (**manuscript drafted for publication**)
- 11 **Keno David Kowanga**, Joan John Eliona Munissi, Rose Masalu, Stephen Samwel Nyandoro, Pax Masimba and Erastus Gatebe. 2017. Antimycobacterial and Cytotoxic Activities of Extracts from Fungal isolates of Lake Magadi. International Journal of Chemical and Biological Sciences. 11(5): 2430-2441. DOI: <https://dx.doi.org/10.4314/ijbcs.v11i5.38>
- 10 **Keno David Kowanga**, Erastus Gatebe, Godfrey Omare Mauti, Eliakim Mbaka Mauti, 2016. Kinetic, Sorption Isotherms, pseudo-first-order Model and pseudo-second-order Model Studies of Cu(II) and Pb(II) using defatted *Moringa oleifera* seed powder. *The Journal of Phytopharmacology* [The Journal of Phytopharmacology](https://doi.org/10.4314/ijbcs.v11i5.38), 2016;5(2):71-78

- 9 **Keno David Kowanga**, Erastus Gatebe, Godfrey Omare Mauti and Eliakim Mbaka Mauti, 2016. Comparative Studies of Alum, Maerua Subcordata Root Tuber Powder and Juice Extract as Coagulation/Flocculation Agents. *International Journal of Pharmaceutical, Chemical and Biological Sciences*. ISSN: 2249-9504. *IJPCBS* 2016, 6(2), 244-250. <http://www.ijpcbs.com/files/19-04-2016/16-630.pdf>
- 8 **Keno David Kowanga**, Godfrey Omare Mauti, Eliakim Mbaka, 2016. Effect of Crude and Defatted *Moringa oliefera* Seeds as Natural Coagulants in the Removal of Physical, Chemical and Bacteriological Parameters from Turbid River Water. *Journal of Scientific and Innovative Research*. ISSN 2320-4818. [J. of Sci. Inno. Res., 2016;5\(1\):19-25](#)
- 7 Godfrey Omare Mauti, Justus Onguso, **David Keno Kowanga**, Eliakim Mbaka Mauti, 2016. Biodegradation Activity of *Aspergillus niger* Lipase Isolates from a Tropical Country Garage. *Journal of Scientific and Innovative Research*. ISSN 2320-4818. [J. of Sci. Inno. Res., 2016;5\(1\):15-18](#) (Accepted: 05-02-2016)
- 6 Godfrey Omare Mauti and **David Keno Kowanga**. 2015. Phytochemical Screening and GC-MS Analysis of Ethanolic Extract of Tubers of *Maranta arundinacea* L. Research Journal of Pharmaceutical, Biological and Chemical Sciences. ISSN: 0974-8485
- 5 **Keno Kowanga**, Godfrey Omare Mauti, Eliakim Mbaka Mauti, 2015. Biosorption for lead (II) ions from aqueous solutions by the biomass of *Spyridia filamentosa* algal species found in Indian Ocean. *Journal of Scientific and Innovative Research*. ISSN 2320-4818. [J. of Sci. Inno. Res., 2015;4\(5\):218-220](#)
- 4 Godfrey Omare Mauti, Eliakim Mbaka Mauti, **David Keno Kowanga**, 2015. Evaluation of malaria spread in relation to poor environmental conditions at Kibaha district (Tanzania). *Journal of Scientific and Innovative Research*. ISSN 2320-4818. [J. of Sci. Inno. Res., 2015;4\(5\):203-206](#)
- 3 Eliakim Mbaka Mauti Godfrey Omare Mauti, Justus M. Onguso, **David Keno Kowanga**, 2015. An investigative study of dwarf mango (Boribo Muyini) seed kernel extracts against inflammatory agent *Staphylococcus aureus*. *Journal of Scientific and Innovative Research*. ISSN 2320-4818. [J. of Sci. Inno. Res., 2015;4\(5\):200-202](#)
- 2 Godfrey Omare Mauti, **Keno Kowanga**, Emmanuel Lubosa. 2015. Phytochemical screening to validate the ethnobotanical importance of root tubers of *Dioscorea* species of Meghalaya, North East India. *Journal of Medicinal Plants Studies*. Year: 2015, Volume:1, Issue:7 First page: (62) Last page: (69) ISSN:2323-3861 Online Available at www.plantsjournal.com
- 1 **Keno D. Kowanga**, Erastus Gatebe, George T. Thiong'o, Patrick Kareru, 2012. Biosorption of Cu(II) and Pb(II) using *Maerua subcordata* root tubers. *Tanzania Journal of Natural and Applied Sciences*. ISSN 1821-7249. <http://www.sjutpress.org/ojs/index.php/tajonas/article/view/65/68>

- 6 Godfrey Omare Mauti, Eliakim Mbaka Mauti, **David Keno Kowanga**, 2021 Anticancer of *Eugenia jambolana* Seed on Human Epithelioma Type 2 (Hep-2) Cells. Oral Presentation at 1st Bomet University College International Conference held 22nd to 24th June 2021 on the Theme: "Towards a sustainable green economy – Bomet University College"

- 5 **Keno D. Kowanga**, Joan J. E. Munissi, Stephen S. Nyandoro, Rose Masalu and Erastus Gatebe. 2018. Fatty Acids Composition of Fungal Isolates from Lake Magadi – Possible Biofuel Feedstock. Oral Presentation at the International Conference of the Natural Products Research Network for Eastern and Central Africa – Kenya held on 8th – 10th February 2018 at SAJOREC in JKUAT, Kenya on the Theme: “*Utilization of Natural Products for the Betterment of the Livelihood of Man*”
- 4 **Keno D. Kowanga**, Joan J. E. Munissi, Stephen S. Nyandoro, Rose Masalu, Erastus Gatebe, 2016. *Qualitative Analysis of Fatty Acid composition of Selected Fungi from Lake Magadi using GC-MS*. Poster presentation at the scientific conference on the 50th Anniversary of CoNAS (formerly Faculty of Science) held at the University of Dar es Salaam, Dar es Saalam, Tanzania, 30th March - 1st April, 2016 on theme “*Science for Sustainable Development*”
- 3 **Keno D. Kowanga**, Erastus Gatebe, George T. Thiong’o, Patrick Kareru, 2012. *Comparative studies of crude and defatted Moringa oliefera seeds as natural coagulants in removal of physical, chemical and bacteriological paramenters from turbid water*. Presented at The Seventh JKUAT Scientific, Technological and Industiralization Conference, 15th – 16th November, 2012 on the theme ‘*Science, Technology and Innovation for Sustainable Development*’.
- 2 **Keno D. Kowanga**, Erastus Gatebe, George T. Thiong’o, Patrick Kareru, 2012. *Effect of varying sorption parameters during biosorption of Cu(II) and Pb(II) from aqueous solution*. Presented at Masinde Muliro University of Science and Technology Annual Conference, 28th – 30th June, 2012. Hosted by the Faculty of Education and Social Sciences on the theme ‘*Action Research in Higher Education and Development in Africa*’.
- 1 **Keno D. Kowanga**, Erastus Gatebe, George T. Thiong’o, Patrick Kareru, 2012. *Effect of defatted Moringa oliefera seed powder in removal of Cu(II) and Pb (II) from aqueous solution*. Presented at Jomo Kenyatta University of Agriculture and Technology, Institute of Tropical Medicine and Infectious Diseases. Third Annual ITROMID Scientific Conference, 24th – 25th May.

BOOKS AUTHORED

- 1 Godfrey Omare Mauti, Eliakim Mbaka Mauti and **David Keno Kowanga**, Herbs versus Pathogens: Medicinal Plants Ravage Wound and Pus Pathogens. *Lambert Academic Publishing. ISSN: 978-3-659-79327-1*

WORKSHOPS/SEMIARS

- 5 Training Workshop on STEM in “Catalysing Diversity Equity and Inclusion on Chemical Sciences and STEM” held on **27th February 2024** at the Amphitheatre Maseno University
- 4 Departmental Seminar Series in “Fungi as Source of Biofuel” held on **26th January 2024** @ Chemistry Lab 3, Chemistry Department, Maseno University
- 3 Postgraduate Training Workshop (3 ECT) in “Science and Leadership for Transforming Institutions” The Research School for Society, Landscape and Land use at the Swedish University of Agriculture Sciences and the University of Dar es Salaam conducted on the 10th March 2017

- 2 16th NAPRECA Pre-Symposium Workshop on “NMR for Structural Elucidation of Natural Products, Nanomedicine and Computer Aided Drug Design” conducted at Nelson Mandela African Institute of Science and Technology, Arusha, Tanzania on August 25th – 29th 2015
- 1 DAAD and ITOCA Workshop on “Tapping into e-resources for DAAD Scholars” conducted on July 27th – 30th , 2015 at the White Sands Hotel.

REFEREES

Prof. Erastus Gatebe, Ph.D.

Professor of Analytical/Environmental
Chemistry, JKUAT

Chief Research Scientist, KIRDI

Chairperson, Board of Directors,

Kenya Radiation Protection Board

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