

## CURRICULUM VITAE

<b>PERSONAL INFORMATION</b>	<p><b>Dr. Keno David Kowanga, PhD</b>                  Maseno University                  Department of Chemistry                  Private Bag, Maseno                  +254 720 170 612  <a href="mailto:kenokowanga@gmail.com">kenokowanga@gmail.com</a>                  2<sup>nd</sup> November 1987                  Fluent in English and Swahili                  Male                  Married                  Kenyan</p>
<b>CAREER ASPIRATION</b>	To be an effective and competent lecturer and researcher in Chemistry and to work in a challenging and dynamic institution or organization in <b>Organic Chemistry, Analytical Chemistry</b> and <b>Natural Product Chemistry</b> with dedication, creativity and implementation of existing policies through teamwork
<b>PROFESSIONAL QUALIFICATION</b>	
2013 – 2019	Ph.D. Chemistry University of Dar es Salaam <b>Advisor:</b> Dr. Joan Munissi
2010 – 2012	M.Sc. Chemistry Jomo Kenyatta University of Agriculture and Technology <b>Advisor:</b> Prof. Erastus Gatebe
2006 – 2009	B.Sc. Analytical Chemistry Jomo Kenyatta University of Agriculture and Technology <b>[First Class Honours]</b>
2001 – 2004	Kenya Certificate of Secondary Education St. Mary's Boys' Secondary School
1993 – 2000	Kenya Certificate of Primary Education Segat Township Primary School
<b>DIPLOMA/CERTIFICATE</b>	
2015 - 2016	Diploma in Higher Education Kampala International University
2005	Certificate in Computers Kirinyaga School of Professional Studies
<b>EMPLOYMENT PROFILE:</b> Mar. 2021 – To Date	<p><b>Lecturer, Department of Chemistry Maseno University</b></p> <p><b>Duties</b></p> <ul style="list-style-type: none"> <li>• To contribute towards the achievement of the Mission and Vision of the University;</li> <li>• To contribute effectively to the creation and circulation of knowledge through effective teaching, research and publishing;</li> <li>• To enrich the intellectual development of students through interactions and academic counselling in area of specialization;</li> <li>• To participate in institution building and extra-curricular activities of department in order to create a rich and vibrant intellectual environment at Maseno University.</li> </ul>

Feb. 2020 – Feb. 2021	<p><b>Lecturer, Pharmacy Department</b> <b>Kampala International University in Tanzania</b></p> <p><b>Duties:</b></p> <ul style="list-style-type: none"> <li>• Mentor young academicians, teach and supervise undergraduate and diploma students.</li> <li>• Develop and continually improve the curricular of courses that I teach.</li> <li>• Research and publish academic articles/books in area of my specialization.</li> <li>• Advice students and colleagues on appropriate subject matters consistent with my academic background and training.</li> <li>• Develop a marking scheme for the courses that I teach, carry out progressive assessments, set and mark examinations in the courses that I teach.</li> <li>• Attend relevant meetings, discuss matters as per the agenda and perform any duties as may be assigned to me by relevant university authorities.</li> </ul>
Jan. 2012 – May 2019	<p><b>Assistant Lecturer, Pharmacy Department</b> <b>Kampala International University in Tanzania</b></p> <p><b>Duties:</b></p> <ul style="list-style-type: none"> <li>• Mentor young academicians, teach and supervise undergraduate and diploma students.</li> <li>• Develop and continually improve the curricular of courses that I teach.</li> <li>• Research and publish academic articles/books in area of my specialization.</li> <li>• Advice students and colleagues on appropriate subject matters consistent with my academic background and training.</li> <li>• Develop a marking scheme for the courses that I teach, carry out progressive assessments, set and mark examinations in the courses that I teach.</li> <li>• Attend relevant meetings, discuss matters as per the agenda and perform any duties as may be assigned to me by relevant university authorities.</li> </ul>
Jan. 2011 – Dec. 2011	<p><b>Senior Tutor</b> <b>Kenya Institute of Development Studies</b></p> <p><b>Duties:</b></p> <ul style="list-style-type: none"> <li>• Teach and supervise diploma and certificate students.</li> <li>• Setting and Invigilating CATs and Exams</li> <li>• Marking CATs, Practicals and Exams</li> </ul>
Feb. 2010 – May 2010	<p><b>Laboratory Technician</b> <b>Aquatech Industries Limited</b></p> <p><b>Duties</b></p> <ul style="list-style-type: none"> <li>• Portable water treatment and analysis.</li> <li>• Waste water treatment and analysis.</li> <li>• Industrial water treatment and analysis.</li> <li>• Boiler water, cooling and chillers water treatments/analysis.</li> <li>• Chemical and Bacteriological water analysis</li> </ul>
Dec. 2009 – Jan. 2010	<p><b>Quality Assurance</b> <b>Kericho Water and Sanitation Company Limited</b></p> <p><b>Duties:</b></p> <ul style="list-style-type: none"> <li>• Tests: Turbidity Test, TDS Test, Chlorine Residue Test, PH Test and Jar Test</li> <li>• Processes: Chlorine Dose, Alum Dose and Ph Stabilization</li> </ul>

<p>Jan. 2009 – April 2009</p>	<p><b>Research Assistant</b> <span style="float: right;"><b>Tea Research Foundation of Kenya</b></span></p> <p><i>Duties</i></p> <ul style="list-style-type: none"> <li>• Soil Sampling</li> <li>• Determination of pH</li> <li>• Air drying of soil</li> <li>• Milling and sieving</li> <li>• Extraction, dilution and analysis of nitrates</li> </ul> <p><b>Research Project:</b>  <i>Colometric Determination of Nitrate-Nitrogen in Tea Soils using Copperized-Cadmium Reduction Procedure.</i></p>
<p><b>FUTURE AMBITIONS</b></p>	<p>To be a Scholar, Researcher and a Consultant</p>
<p><b>GRANTS AND SCHOLARSHIPS</b></p> <p>2014</p> <p>2013 – 2019</p> <p>2011</p> <p>2006 – 2009</p>	<p>National Commission for Science, Technology and Innovation through Science, Technology and Innovations (ST&amp;I) Research Grant NACOSTI/RCD/ST&amp;I 5<sup>th</sup> 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”</p> <p>NAPRECA-DAAD Scholarship; to pursue Ph.D. Chemistry at University of Dar es Salaam Chemistry Department. (Successfully finished and graduated with PhD Chemistry)</p> <p>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: <i>Maerua subcordata</i>, <i>Moringa oleifera</i> and <i>Prosopis juliflora</i>”</p> <p>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})</p>
<p><b>RESEARCH DONE</b></p> <p>Ph.D. Thesis</p> <p>M.Sc. Thesis</p>	<p>Metabolites from Selected Plant Species and Salt Lake Fungi: Their Antimycobacterial Properties and Biodiesel Feedstock Potential</p> <p>Clarification of Turbid River Water and Biosorption of Aqueous Cu(II) and Pb(II) using Natural Coagulants: <i>Maerua subcordata</i>, <i>Moringa oleifera</i> and <i>Prosopis juliflora</i>.</p>
<p>B.Sc. Research</p> <p>Research</p>	<p>Development of Wood Adhesives based on Cashew Nutshell Liquid (CNSL).</p> <p>Colometric Determination of Nitrate-Nitrogen in Tea Soils using Copperized-Cadmium Reduction Procedure.</p>
<p><b>PUBLICATIONS</b></p>	<p>12 Joan J.E. Munissi, Stephen S. Nyandoro, <b>Keno David Kowanga</b>, James G. Mayeka, Rose J. Masalu, Máté Erdélyi and Erastus G. Gatebe. New Prenylated Flavones and Nor-Sesquiterpenoid from <i>Erythrina Sacleuxii</i> (Fabaceae) (manuscript drafted for publication)</p>

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- 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\*, 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 oleifera* 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](#)
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	<p>2 Godfrey Omare Mauti, <b>Keno Kowanga</b>, Emmanuel Lubosa. 2015. Phytochemical screening to validate the ethnobotanical importance of root tubers of <i>Dioscorea</i> species of Meghalaya, North East India. <i>Journal of Medicinal Plants Studies</i>. Year: 2015, Volume:1, Issue:7 First page: (62) Last page: (69) ISSN:2323-3861 Online Available at <a href="http://www.plantsjournal.com">www.plantsjournal.com</a></p> <p>1 <b>Keno D. Kowanga</b>, Erastus Gatebe, George T. Thiong'o, Patrick Kareru, 2012. Biosorption of Cu(II) and Pb(II) using <i>Maerua subcordata</i> root tubers. <i>Tanzania Journal of Natural and Applied Sciences</i>. ISSN 1821-7249. <a href="http://www.sjutpress.org/ojs/index.php/tajonas/article/view/65/68">http://www.sjutpress.org/ojs/index.php/tajonas/article/view/65/68</a></p>
<p><b>CONFERENCE AND POSTERS</b></p>	<p>5 <b>Keno D. Kowanga</b>, 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 8<sup>th</sup> – 10<sup>th</sup> February 2018 at SAJOREC in JKUAT, Kenya on the Theme: “<i>Utilization of Natural Products for the Betterment of the Livelihood of Man</i>”</p> <p>4 <b>Keno D. Kowanga</b>, Joan J. E. Munissi, Stephen S. Nyandoro, Rose Masalu, Erastus Gatebe, 2016. <i>Qualitative Analysis of Fatty Acid composition of Selected Fungi from Lake Magadi using GC-MS</i>. Poster presentation at the scientific conference on the 50<sup>th</sup> Anniversary of CoNAS (formerly Faculty of Science) held at the University of Dar es Salaam, Dar es Saalam, Tanzania, 30<sup>th</sup> March - 1<sup>st</sup> April, 2016 on theme “<i>Science for Sustainable Development</i>”</p> <p>3 <b>Keno D. Kowanga</b>, Erastus Gatebe, George T. Thiong'o, Patrick Kareru, 2012. <i>Comparative studies of crude and defatted Moringa oliefera seeds as natural coagulants in removal of physical, chemical and bacteriological parameters from turbid water</i>. Presented at The Seventh JKUAT Scientific, Technological and Industrialization Conference, 15<sup>th</sup> – 16<sup>th</sup> November, 2012 on the theme ‘<i>Science, Technology and Innovation for Sustainable Development</i>’.</p> <p>2 <b>Keno D. Kowanga</b>, Erastus Gatebe, George T. Thiong'o, Patrick Kareru, 2012. <i>Effect of varying sorption parameters during biosorption of Cu(II) and Pb(II) from aqueous solution</i>. Presented at Masinde Muliro University of Science and Technology Annual Conference, 28<sup>th</sup> – 30<sup>th</sup> June, 2012. Hosted by the Faculty of Education and Social Sciences on the theme ‘<i>Action Research in Higher Education and Development in Africa</i>’.</p> <p>1 <b>Keno D. Kowanga</b>, Erastus Gatebe, George T. Thiong'o, Patrick Kareru, 2012. <i>Effect of defatted Moringa oliefera seed powder in removal of Cu(II) and Pb (II) from aqueous solution</i>. Presented at Jomo Kenyatta University of Agriculture and Technology, Institute of Tropical Medicine and Infectious Diseases. Third Annual ITROMID Scientific Conference, 24<sup>th</sup> – 25<sup>th</sup> May.</p>
<p><b>BOOKS AUTHORED</b></p>	<p>Godfrey Omare Mauti, Eliakim Mbaka Mauti and <b>David Keno Kowanga</b>, Herbs versus Pathogens: Medicinal Plants Ravage Wound and Pus Pathogens. <i>Lambert Academic Publishing</i>. ISSN: 978-3-659-79327-1</p>

<b>WORKSHOPS</b>	<p>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 10<sup>th</sup> March 2017</p> <p>2 16<sup>th</sup> 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 25<sup>th</sup> – 29<sup>th</sup> 2015</p> <p>1 DAAD and ITOCA Workshop on “Tapping into e-resources for DAAD Scholars” conducted on July 27<sup>th</sup> – 30<sup>th</sup> , 2015 at the White Sands Hotel.</p>
<b>STUDENTS SUPERVISED</b>	<p>4 <b>Furaha Aidan Mfikwa</b>, Dissertation “Analysis of Content of Vitamin C in various fruits and vegetables consumed by Dar es Salaam Residents” ongoing to be completed August 2020</p> <p>3 <b>Antony M Kasogota</b>, Dissertation “Ethinomedical Survey And Phytochemical Analysis Of Plants Used In Managements Of Snake Bite At Kazimzumbwi Ward In Kisarawe District” completed and graduated 2018</p> <p>2 <b>Monyi Joseph</b>, Dissertation “Ethinomedical Survey and Phytochemical Analysis of Selected Plants that are Used for the Management of Gonorrhoea at Kazimzumbwi – Kisarawe District.” Completed and graduated 2018</p> <p>1 <b>Samora J Mahundi</b>, Dissertation “Ethinomedical Survey and Phytochemical Analysis of Plants Used in Managements of HIV/AIDS at Kazimzumbwi Ward in Kisarawe District” completed and graduated 2018</p>
<b>HOBBIES AND INTEREST</b>	<p>Reading Scientific Journals and Magazines</p> <p>Charity Work and Singing in a Church Choir</p>
<b>SKILLS AND COMPITENCE</b>	<p>Fast in terms of learning and adjusting to different working environment</p> <p>Ability to work under minimum supervision, multi-cultural and multi-ethnic environment.</p> <p>Excellent interpersonal relations, computer skills, report writing, and leadership skills.</p>

#### 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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