

CURRICULUM VITAE



PERSONAL DETAILS

Name: Rahab Wairimu Kamau
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Citizenship: Kenyan
Date of Birth: 18th January, 1984

CAREER OBJECTIVE

To be a resourceful lecturer who will contribute to growth of Science by engaging in teaching, active research, publishing data and consultancies

PROFESSIONAL AND EDUCATIONAL BACKGROUND

2020: University of Dar es Salaam

Doctor of philosophy in Chemistry. **Thesis Title** ‘Secondary Metabolites from *Cordia africana*, *C. monoica* and *Gnidia apiculata* and their assessment for antimicrobial, cytotoxic and antiplasmodial activities’

2013: Masinde Muliro University of Science and Technology

Master of Science in Chemistry. **Thesis Title:** Phytochemical Constituents and Antimicrobial Activity of *Melia Volkensii*

2008: Masinde Muliro University of Science and Technology

Bachelor of Education (Science) - *First Class Honors*

WORK EXPERIENCE

March 2021 to Date: Masinde Muliro University of Science and Technology

Position: Lecturer in department of Pure and Applied Chemistry

Duties:

- i. Teaching undergraduate courses in the department of Pure and Applied Chemistry
- ii. Guiding undergraduate students in research projects and industrial attachment
- iii. Supervision of postgraduate research projects
- iv. Participating in community outreach activities

October 2013- March 2021: Masinde Muliro University of Science and Technology

Position: Assistant Lecturer in department of Pure and Applied Chemistry

Duties:

- i. Teaching undergraduate courses in the department of Pure and Applied Chemistry
- ii. Guiding undergraduate students in research projects and industrial attachment
- iii. Coordination of exams and timetabling in the department
- iv. Engaging in research activities
- v. Participating in community outreach activities

August 2009- September 2013: Masinde Muliro University of Science and Technology

Position: Graduate Assistant in department of Pure and Applied Chemistry

Duties:

- i. Teaching in collaboration with course lecturers
- ii. Carrying out research
- iii. Guiding students on school practice
- iv. Marketing MMUST programs and products

September, 2008-August, 2009: Ondiri Secondary School

Position- Teacher

Duties: Teaching Chemistry and Mathematics, Guiding and Counseling students, organizing and participating in extra-curricular activities

PUBLICATIONS

- i. Onjero, I., Juma, B. F., Korir, J. C., & **Kamau, R. W.** (2020). Antimicrobial Activity and Interactions of *Toddalia asiatica* Isolated Coumarins with Two Known Drugs. *International Research Journal of Pure and Applied Chemistry*, 1–16. <https://doi.org/10.9734/irjpac/2020/v21i1530248>
- ii. Veronica M. Masila, Albert J. Ndakala, Robert Byamukama, Jacob O. Midiwo, **Rahab W. Kamau**, Mei Wang, Mallika Kumarihamy, Jianping Zhao, Matthias Heydenreich and Illias Muhammad (2020). Synthesis, structural assignments and anti-infective activities of 3-*O*-benzyl-carvotacetone and 3-hydroxy-2-isopropyl-5-methyl-*p*-benzoquinone. *Natural Product Research*, 1-9. <https://doi.org/10.1080/14786419.2020.1716346>
- iii. **Kamau, R. W.**, Midiwo, J. O., Mgani, Q. A., Masila, V. M., Omosa, L. K., Bwire, R. N., Jacob, M. R., Wiggers, F. T., & Muhammad, I. (2019). Oleanolic Acid and other Compounds Isolated from *Cordia africana* Lam which Inhibit Vancomycin Resistant Enterococcus. *Pharmacognosy Communications*, 9(3), 91–95. <https://doi.org/10.5530/pc.2019.3.19>
- iv. Wekesa N J, Lilechi D B, Sigot A, Cheruiyot J K, **Kamau R W** and Kisiangani P. (2016); Volatile and Non-polar Chemical Constituents of Cultivated Oyster Mushroom *Pleurotus ostreatus*. *International Journal of Pharmacognosy and Phytochemical Research*, 8(3): 477-479.
- v. Baraza, L. D., Nesor, W., Jackson, K. C., Fredrick, J. B., Dennis, O., **Wairimu, K. R.**, Keya, A. O., & Heydenreich, M. (2016). Antimicrobial Coumarins from the Oyster Culinary-Medicinal Mushroom, *Pleurotus ostreatus* (Agaricomycetes), from Kenya.

International Journal of Medicinal Mushrooms, 18(10), 905–913.
<https://doi.org/10.1615/IntJMedMushrooms.v18.i10.60>

- vi. **Rahab W. Kamau**, Benard F. Juma and Lilechi D. Baraza. (2015); Antimicrobial compounds from root, stem-bark and seeds of *Melia volkensii*. *Natural Product Research*, 30(17): 1-4. <https://doi.org/10.1080/14786419.2015.1101104>

CONFERENCES, WORKSHOPS AND SEMINARS

8th March, 2021: Participated in a webinar ‘**Commonwealth Chemistry launch event- Addressing gender prity across the Commonwealth**’ organized by Chemistry World Webinars.

7-9th December, 2019: Presented a poster entitled, ‘*Oleanolic acid and other compounds isolated from Cordia africana Lam which Inhibit Vancomycin resistant Enterococcus*’ during the 18th NAPRECA symposium in Heliopolis University Cairo, Egypt.

4-5th December, 2019: Workshop on, ‘*Spectroscopic Techniques for Natural Products and Analysis*’ at Faculty of Pharmacy, Heliopolis University, Cairo-Egypt.

26-27th June, 2019: A training workshop on ‘*Soft skills*’, at University of Nairobi-Kenya.

16th February, 2018: Attended a seminar on ‘*How to prepare a scientific poster and how to write a research publication*’ at University of Nairobi, Kenya.

17th -20th November, 2017: Participated in ‘*Chemical Inventory Management System Training for Universities in Western Kenya*’, held in Kisumu, Kenya.

12-15 September, 2017: DAAD Workshop on ‘*E-resources*’, at Ramada Resort, 170-171 Jangwani Beach, Dar es Salaam-Tanzania.

20-22nd June, 2017: Train the Trainer Workshop for the ‘*unregulated Chemical market and Kariobagi light Industries*’, at Great Rift Valley Lodge Naivasha Kenya.

30th June, 2016: Participated in the lectures on ‘*The Role of Higher Education in Improving Agricultural Livelihoods and Economic Development*’ during the annual Stakeholders Field Day at the Agricultural Training Center in Busia County

24th-28th August, 2015: Participated in a workshop on ‘*GC-MS- A versatile analytical technique for mixture component Identification and Quantification*’ at Jomo Kenyatta University of Agriculture and Technology-KENYA

26th-29th May, 2014: Attended the 4th African Conference on ‘*Edible and Medicinal Mushrooms (ACEMM)*’, hosted by MMUST at Golf Hotel Kakamega, Kenya

23rd-24th January, 2014: Participated in ‘*University Multiplication Training Workshop on Curriculum development and Review for Public Universities in Kenya: Implementation and Accreditation*’ at MCU, MMUST in Kakamega, Kenya.

19th-22nd June, 2013- participated in the 11th University exhibitions on ‘*Celebrating expansion of University education through diversity and integration*’ at Kenyatta International Conference Center (KICC), Nairobi, Kenya

8th-12th August, 2011- The 14th Natural Products of East & Central Africa (NAPRECA) symposium and Association for African Medicinal Plants Standards (AAMPS)

Ethnoveterinary medicine symposium on ‘*Natural Products from African Biodiversity*’ at International Center for Physiology & Ecology (ICIPE) Kasarani, Nairobi, Kenya

1-5th August, 2011- Participated in NAPRECA Pre-symposium workshop on, ‘*Organic synthesis, Spectroscopy and Bioassay Techniques*’, organized by NAPRECA network at Chiromo campus, University of Nairobi

GRANTS

2020: MMUST Covid-19 research grant (KSh 500,000) to conduct a research on ‘Alternative medicines for reducing vulnerability to Covid-19 infection’.

2020: CRDF Global grant (\$ 9,309.00) for ‘Chemical Safety and Security Door-to-Door Outreach Campaign for Ngong, Kikuyu and Thika, Kenya’.

2017: CRDF Global grant (\$ 2740.00) for ‘Chemical Safety and Security Door-to-Door Outreach in Wakulima Market and Gikomba Market, Kenya’.

2017: CRDF Global grant (\$ 4675.00) for ‘Chemical Safety and Security workshop in Hotel Spices, Kawangware, Nairobi- Kenya.’

2012: Master of Science Thesis funding (Ksh 120,000) by HP Catalyst Initiative in MMUST

2010: Science, Technology and Innovation competitive grant (KSh 200,000) for Master of Science – Ref. NCST/5/003/2nd CALL M.Sc/37

SCHOLARSHIPS & AWARDS

2019: Certificate for the best poster ‘*Oleanolic acid and other compounds isolated from Cordia africana Lam which Inhibit Vancomycin resistant Enterococcus*’ presented during the 18th NAPRECA symposium in Heliopolis University Cairo, Egypt held on 7-9th December, 2019.

2016: DAAD-NAPRECA scholarship for PhD studies, 2016

2015: Top Lecturer of the year, Female during the 1st MMUST Gala Dinner and 2015 Awards ceremony held on Friday, 18th December, 2015 at MMUST Multipurpose Hall.

MEMBERSHIP TO PROFESSIONAL BODIES

i. Kenya Chemical Society member No. W09

Duties: Attending organized trainings, Organizing and conducting workshops and door-to-door campaigns on Chemical Safety and Security

ii. International Network for Women in Engineering and Science member No. IND 158

Duties: Participating in regional campaigns on empowering the girl child towards STEM subjects in various secondary schools

iii. DAAD alumni

TECHNICAL AND OTHER SKILLS

- Competent in Microsoft office, Chemdraw and MNOVA programs

- Working experience on chromatographic separation techniques and analytical tools (GCMS, UV-VIS, FTIR, NMR)
- Good skills in quality control and curriculum development acquired during workshops at MMUST
- Very good organizational skills acquired from research activities and administrative duties assigned in the department.

Excellent communication skills acquired from team-teaching, research and marketing university programs

PERSONAL INTERESTS

- Carrying out research
- Motivating youth
- Scientific reading

REFEREES

1. Dr. Danstone L.Baraza
Chairman, Department of Pure and Applied Chemistry
Masinde Muliro University of Science and Technology
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2. Prof. Jacob O. Midiwo
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3. Dr. Benard Juma
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