

CURRICULUM VITAE



PERSONAL DETAILS

Name Prof. Leonidah Kerubo Omosa
Citizenship Kenyan
Marital Status Married
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Citations 351
h-index 11
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EDUCATION BACKGROUND

2009	PhD	University of Nairobi (UoN)	Kenya	Natural Products Chemistry
1996	MSc	University of Devi Ahilya (M.P)	India	Applied Chemistry
1994	BSc	University of Barkatullah, Bhopal	India	Chemistry, Zoology and Botany

TEACHING EXPERIENCE

1)	3rd May 2019 to Date	Ass. Professor	Department of Chemistry	UoN
2)	2014-2019	Senior Lecturer	Department of Chemistry	UoN
3)	2004-2014	Lecturer	Department of Chemistry	UoN
4)	2000-2004	Tutorial Fellow	Department of Chemistry	UoN
5)	1997-2000	Graduate Assistant	Department of Chemistry	UoN

NEW POSITION

28th November, 2019 Dean, School of Physical Sciences (SPS), University of Nairobi (UoN)

ACADEMIC PUBLICATIONS

PUBLISHED PUBLICATIONS

- 1) VADERAMENT-A. Two new flavonoids from *Dracaena usambarensis* Engl. *Phytochemistry Letters* 36, 80-85 **2020**
Nchiozem-Ngnitedema, Leonidah Kerubo, Omosa, Solomon Derese, Pierre Tane, Matthias Heydenreich, Michael Spiteller, Ean-
Impact Factor 1.575

- Jeong Seo, Thomas Efferth
- 2) Ruth Anyango Omole, Mainen Julius Moshi, Muhammad Ilias, Walker Larry, Hamisi M. Malebo, **Leonidah Kerubo Omosa**, Jacob O. Midiwo *In vitro* Antiplasmodial and Cytotoxic activity of Three Medicinal Plants used Traditionally for Treatment of Malaria *Pharmacognosy Communications Impact Factor 1.32* 10(1), 2-6 **2020**
 - 3) Evans Okemwa Kenanda, **Leonidah Kerubo Omosa** *Anti-leishmanial activity of some surface compounds of Tarchonanthus camphoratus* *Investigational Medicinal Chemistry & Pharmacology* 2(2), 30 **2019**
 - 4) Kefah Nyatuka Okerio, Evans Okemwa Kenanda, **Leonidah Kerubo Omosa** Antiproliferative Properties of Labdane Diterpenoids from *Croton sylvaticus* Hochst against Drug Sensitive and Resistant Leukemia cell lines *Investigational Medicinal Chemistry & Pharmacology* 2(2), 31 **2019**
 - 5) Ruth A. Omole, Mainen J. Moshi, Matthias Heydenreich, Hamisi M. Malebo, Jeremiah W. Gathirwa, Richard O. Oriko, Leonida K. Omosa, Jacob O. Midiwo Antiplasmodial Biflavanones from the Stem Bark of *Garcinia buchananii* Engl. *Pharmacognosy Communications Impact Factor 1.32* 9(3), 96-99 **2019**
 - 6) Rahab W. Kamau, Jacob O. Midiwo, Quintino A. Mgani, Veronica M. Masila, Leonidah K. Omosa, Regina N. Bwire, Melissa R. Jacob, Frank T. Wiggers, Ilias Muhammad Oleanolic Acid and other Compounds Isolated from *Cordia Africana* Lam which Inhibit Vancomycin Resistant *Enterococcus* *Pharmacognosy Communications Impact Factor 1.32* 9(3), 91-95 **2019**
 - 7) Ruth Anyango Omole, Mainen Julius Moshi, Matthias Heydenreich, Hamisi M. Malebo, Sharon Alice Ochieng', **Leonidah Kerubo** Two novel lignans derivatives and two fusicoccane diterpenoids from whole plant of *Hypoestes verticillaris* (L.f.) Sol. ex Roem. & Schult *Phytochemistry Letters Impact Factor 1.575* 30, 194-200 **2019**

Omosa, Jacob Ogweno
Midiwo

- 8) Thomas Efferth, **Leonidah K. Omosa et al** "Biopiracy versus One-World Medicine–From Colonial Relicts to Global Collaborative Concepts" *Phytomedicine, Elsevier, Impact Factor 3.373* 53, 319-331 **2019**
- 9) **Leonidah Kerubo Omosa**, Gacheru Martin Mbogo, Eric Korir, Ruth Omole, Ean-JeongSeo, Abiy Yenesew, Matthias Heydenreich, Jacob Ogweno Midiwo, Thomas Efferth. Cytotoxicity of Fagaramide Derivative and Canthin-6-one from *Zanthoxylum* (Rutaceae) Species against Multidrug Resistant Leukemia Cells *Natural Products Research Impact Factor 1.928* <https://doi.org/10.1080/14786419.2019.1587424> **2019**
- 10) **Leonidah K. Omosa**, Beatrice Amugune, Peggoty Mutai, Esther Karumu, Nilian Mukungu, Martha Induli, Francisca Kama-Kama, Victor Kuete. Rapid Screening Using GIBEX Screens-To-Nature System of Ethnomedicinal Plants from Ngong Forest, Kenya for Potency Against Infectious Diseases and Antioxidant Activities: A Qualitative Study *Pharmacognosy Communications Impact Factor 1.32* 9 (2), 59-74 **2019**
- 11) Isemeki Owino, **Leonidah K. Omosa**, John M. Onyari, Francis Mulaa Improvement of Fastness of *Tagetes minuta* L (Tami) dye onto cotton fabric through functionalization *Journal of Natural Sciences Research www.iiste.org* Accepted **2019**
- 12) Kuete V, **Omosa L.K**, Midiwo J.O, Karaosmanoğlu O, Sivas H. Cytotoxicity of 11 Naturally occurring Phenolics and Terpenoids from Kenyan Flora towards Human Carcinoma Cells *Journal of Ayurveda and Integrative Medicine Impact factor 0.83* <https://doi.org/10.1016/j.jaim.2018.04.001> **2018**
- 13) Mwangi, H.N, Onyango, S, Omosa, L.K Mulaa, F Virtual Screening and Validation of Potential Lead Compound from the Malaria Box against Plasmodium Falciparum S7 and S19 Proteins *Journal of Pharmaceutical Research* 2,2 **2018**
- 14) Nyaboike H. O, Moraa M, **Leonidah K. Omosa**, Mbaveng A. T, Cytotoxicity of Lupeol from the Stem Bark of *Zanthoxylum gillettii* against Multi-factorial *Investigational Medicinal* 1(1),10 **2018**

- Vaderament-Alexe N. N, Masila V, Okemwa E, Heydenreich M, Efferth T, Kuete V. Drug Resistant Cancer Cell Lines *Chemistry & Pharmacology*
- 15) Francisca Kama-Kama, **Leonidah K. Omosa**, Joseph Nganga, Naomi Maina, Georges Osanjo, Souaibou Yaouba, Muhammad Ilias, Jacob Midiwo and Jan Naessens Antimycoplasmal Activities of Compounds from *Solanum aculeastrum* and *Piliostigma thonningii* against Strains from the *Mycoplasma mycoides* Cluster *Frontiers in Pharmacology, Impact Factor 4.04* Doi:103389 /fphar.2017 .00920 8, 920 **2017**
- 16) Ana C. F. Soares, Mirela M. W. Cabral, Carlos H. G. Martins, Alexsandro E. Ferreira, Pedro A. S. Bergamo, **Leonida K. Omosa**, Jacob O. Midiwo, Renato L. T. Parreira, Vladimir C. G. Heleno Study of Anti-Tuberculosis Activity Behaviour of Natural Kaurane and Trachylobane Diterpenes Compared with Structural Properties Obtained by Theoretical Calculations *Natural Products Communications (NPC), Impact Factor 0.91* 12(5), 763-769 **2017**
- 17) **Leonidah K. Omosa**, Jacob O. Midiwo, Victor Kuete Medicinal Spices and Vegetables from Africa: Therapeutic Potential against Metabolic, Inflammatory and Infectious Diseases; Part III, Popoular African Medicinal Spices and Vegetables and their Health Effects *'Curcuma longa' Tumeric, Academic Press an Imprint of Elsevier publishers* 19, 425-433 **2017**
- 18) **Leonidah K. Omosa**, Okemwa, K Antiplasmodial activities of the stem bark extract and compounds of *Zanthoxylum gillettii* (De wild) P.G. Waterman. *Pharmacognosy Communications Impact Factor 1.32* 7(1), 41-46 **2017**
- 19) Okemwa, K, **Leonidah K. Omosa** Pyrazole, Isoxazoline and Bypyrimidine Derivatives from *Polygonum senegalense* and *Psiadia punctulata* Flavonoids and their Anti-Microbial Activities *Pharmacognosy Communications Impact Factor 1.32* 7(1), 47-52 **2017**

- 20) Okemwa, K, **Leonidah K. Omosa** Semi-Synthetic Pyrazoline Derivatives from *Polygonum senegalense* Chalcones and their Anti-Microbial Activities *Pharmacognosy Communications* 7(1), 53-60 **2017**
Impact Factor 1.32
- 21) Victor Kuete, **Leonidah K. Omosa**, Viviane R. SipowoTala, Jacob O. Midiwo, Armelle T. Mbaveng, Sauda Swaleh, Oğuzhan Karaosmanoğlu and Hülya Sivas Cytotoxicity of Plumbagin, Rapanone and 12 other naturally occurring Quinones from Kenyan Flora towards human carcinoma cells *BMC Pharmacology and Toxicology* 17,60 **2016**
Impact Factor 2.03
- 22) Francisca Kama-Kama, Jacob Midiwo, Joseph Ngang'a, Naomi Maina, EliseSchiek, **Leonidah Kerubo Omosa**, George Osanjo, Jan Naessens Selected Ethno-medicinal plants from Kenya with *in vitro* activity against major African livestock pathogens belonging to the "Mycoplasma mycoides cluster" *Journal of Ethnopharmacology*, Elsevier, 192, 524-534 **2016**
Impact Factor 3.261
- 23) James G. Waweru, Helen. N. Njenga, **Leonidah. K. Omosa** Standardization of *Commiphora abyssinica* Engl. Gum Resin from Kajjado, Kenya *IOSR Journal of Applied Chemistry (JAC)* 9(8), 69-74 **2016**
www.iosrjournals.org
- 24) Awas E, **Omosa L.K**, Midiwo J.O, Ndakala A, Mwaniki J. Antioxidant Activities of Flavonoid Aglycones from Kenyan *Gardenia ternifolia* Schum and Thonn *IOSR Journal of Pharmacy and Biological Sciences (JPBS)* 11(3), 136-141 **2016**
www.iosrjournals.org
- 25) **Leonidah K. Omosa**, Jacob O. Midiwo, Armelle T. Mbaveng, Simplic B. Tankeo, Jackson A. Seukep, Igor K. Voukeng, Joachim K. Dzutam, John Isemeki, Solomon Derese, Ruth A. Omolle, Thomas Efferth and Victor Kuete Antibacterial Activity and Structure-Activity Relationships of a Panel of 48 Compounds from Kenyan Plants against Multidrug Resistant Phenotypes *SpringerPlus, SpringerOpen Publishers* 5, 901, doi,10.1186/s40064-016-2599-1 **2016**
Impact Factor 0.982

- 26) Beth Ndunda, Moses K. Langat, Dulcie A. Mulholland, Harry Eastman, Melissa R. Jacob, Shabana I. Khan, Larry A. Walker, Illias Muhammad, **Leonidah O. Kerubo**, Jacob O. Midiwo "New *ent*-clerodane and Abietane diterpenoids from the roots of Kenyan *Croton megalocarpoides* Friis & M.G Gilbert [*] *Planta Medica*, Impact Factor 2.44 doi, <http://dx.doi.org/10.1055/s-0042-108857> **2016**
- 27) **Leonidah K.Omosa**, Jacob O. Midiwo, Veronica M. Masila, Boniface M. Gisacho, Renee Munayi, Francisca-Kamakama, Kitur Phylis Chemutai, Gihan Elhaboo, Mohamed E.M. Saeed, Sami Hamdoun, Victor Kuete, Thomas Efferth Cytotoxicity of 91 Kenyan indigenous medicinal plants towards human CCRF-CEM leukemia cells. *Journal of Ethnopharmacology*, Elsevier, Impact Factor 3.261 179, 177-196 **2016**
- 28) Thomas Efferth, **Leonidah K. Omosa et al** Biopiracy of natural products and good bioprospecting practice. *Phytomedicine*, Elsevier, Impact Factor 3.373 23(2), 166-173 **2016**
- 29) **Leonidah Kerubo** Omosa, Hosea Akala, Evans Okemwa Kenanda, Beth Ndunda Variability of Surface Exudates of *Dodonaea angustifolia* L.f, Antioxidant and Antiplasmodial activities of the compounds *Journal of Natural Sciences Research* www.iiste.org 6(10), 78-85 **2016**
- 30) T. Milugo, **L. K. Omosa**, B. Owuor, J. Oyugi, J. Ochanda, F. Wamunyoloki Anti-cancer Activities of Crude Extracts from Kenyan *Moringa oleifera* Lam and *Rauwolfia caffra* against Selected Cancer Cell Lines *IOSR Journal of Pharmacy and Biological Sciences* www.iosrjournals.org 11(3), 59-64 **2016**
- 31) Doriane E. Djeussi, Louis P. Sandjo, Jaurès A. K. Noumedem, **Leonidah K. Omosa**, Bonaventure T. Ngadjui, and Victor Kuete Antibacterial activities of the methanol extracts and compounds from *Erythrina sigmoidea* against Gram-negative multi-drug resistant phenotypes. *BioMed Central (BMC) Complementary and Alternative Medicine*, Impact Factor 2.02 15, 453 **2015**

- 32) Veronica M. Masila, Jacob O. Midiwo, Jin Zhang, Bonface M. Gisacho, Renee Munayi, **Leonidah K. Omosa**, Frank T. Wiggers, Melissa R. Jacob, Larry A. Walker and Ilias Muhammad
Anti-Vancomycin-resistant *Enterococcus faecium* and *E. faecalis* activities of (-)-gossypol and derivatives from *Thespesia garckeana*
Natural Products Communications (NPC), Impact Factor 0.91
10(4), 613-616
2015
- 33) Beth Ndunda, Moses K. Langat, Jacob O. Midiwo and **Leonidah K. Omosa**
Diterpenoid Derivatives of Kenyan *Croton sylvaticus* Hochst."
Natural Products Communications (NPC), Impact Factor 0.91
10(4), 557-558
2015
- 34) Aggrey Akimanya, Jacob O. Midiwo, Joseph Matasyoh, Francis Okanga, Veronica M. Masila, Larry Walker, Babu L. Tekwani, Ilias Muhammad, **Leonidah Kerubo Omosa**
Two polymethoxylated flavonoids with antioxidant activities and a rearranged clerodanoditerpenoid from the leaf exudates of *Microglossa pyrifolia*.
Phytochemistry Letters, Elsevier, Impact Factor 1.549
11, 183-187
2015
- 35) Lois Muiva-Mutisya, Bernard Macharia, Matthias Heydenreich, Andreas Koch, Hoseah M. Akala, Solomon Dereese, **Leonidah K. Omosa**, Amir O. Yusuf, Edwin Kamau, Abiy Yenesew
6 α -Hydroxy- α -toxicarol and (+)-Tephrocin with antiplasmodial activities from *Tephrosia species*.
Phytochemistry Letters, Elsevier, Impact Factor 1.549
10, 179-183.
2014
- 36) D. K. Kariuki, J. O. Miaron, J. Mugweru, **L. O. Kerubo**
Antibacterial activity of five medicinal plant extracts used by the Maasai people of Kenya.
BEST: IJHAMS
2(7), 1-6
2014
- 37) **Leonidah K. Omosa**, Beatrice Amugune, Beth Ndunda, Trizah K. Milugo, Matthias Heydenreich, Abiy
Antimicrobial flavonoids and diterpenoids from *Dodonaea angustifolia*.
South African Journal of Botany, Elsevier, Impact Factor 1.492
91, 58-62
2014

- Yenesew, Jacob O.
Midiwo
- 38) Trizah K Milugo, **Leonida K Omosa**, James O Ochanda, Bethwell O Owuor, Fred A Wamunyokoli, Julius O Oyugi and Joel W Ochieng Antagonistic effect of alkaloids and saponins on bioactivity in quinine tree (*Rauvolfia caffra* Sond.): Further evidence to support biotechnology in traditional medicinal plants. *BioMed Central (BMC) Complementary and Alternative Medicine*, Impact Factor 2.02 13, 285 2013
- 39) Amugune B.K, Thoithi G.N, Mwangi J.W, **Omosa L.K.** and Kibwage I.O. Antimicrobial activity and bioactive constituents of *Alectra sessiliflora* (Vahl) Kuntze methanol extract. *East African Journal of Pharmaceutical Sciences* 16, 61-68 2013
- 40) Beth Ndunda, Moses K. Langat, John M. Wanjohi, Jacob O. Midiwo, **Leonidah K. Omosa** Alienusolin, a new 4 α -deoxyphorbol ester derivative and crotonimide C, a new glutarimide alkaloid from the Kenyan *Croton alienus* Pax (Euphorbiaceae). *Planta Medica*, Impact Factor 2.44 79, 1-5 2013
- 41) **Leonidah Kerubo**, Jacob Ogweno Midiwo, Solomon Derese, Moses K. Langat, Hosea M. Akala, Norman C. Waters, Martin Peter and Matthias Heydenreich Anti-plasmodial activity of compounds from surface exudates from *Senecio roseiflorus*. *Natural Products Communication*, Impact Factor 0.91 8, 175-176. 2013
- 42) **Leonidah K. Omosa**, Jacob O. Midiwo, Solomon Derese, Abiy Yenesew, Martin G. Peter, Matthias Heydenreich *neo*-Clerodane diterpenoids from *Dodonaea angustifolia*. *Phytochemistry Letters*, Impact Factor 1.549 3, 217-220 2010
- 43) Carolina Echeverry, Florencia Arredondo, Juan Andres Abin-Carriquiry, Jacob Ogweno Midiwo, Charles Ochieng, **Leonidah Kerubo**, Federico Dajas Pretreatment with natural flavones and neuronal cell survival after oxidative stress, a structure-activity relationship study. *Journal of Agriculture and Food Chemistry*, ACS Impact Factor 2.912 58(4), 2111-2115. 2010

REVIEWED PUBLICATIONS

- 1) Armelle T Mbaveng, Victor Kuete, Thomas Efferth Potential of Central, Eastern and Western Africa Medicinal Plants for Cancer Therapy: Spotlight on Resistant Cells and Molecular Targets *Frontiers, Pharmacology, Ethnopharmacology* Impact Factor 4.418 343 2017
- 2) Lei Wen, Yunliang Lin, Ruimin L.V, Huijiao Yan, Jinqian Yu, Hengqiang Zhao, Xiao Wang, Daijie Wang An Efficient Method for the Preparative Isolation and Purification of Flavonoids from Leaves of *Crataegus pinnatifida* by HSCCC and Pre-HPLC *Molecules* 22, 757 Impact Factor 2.749 2017
- 3) Bai S.T, Zhu G.L, Peng X.R, Dong J.R, Yu M.Y, Chen J.C, Wan L.S, Qiu M.H. Cytotoxicity of Triterpenoid Alkaloids from *Buxus microphylla* against Human Tumor Cell Lines *Molecules* 21(9), 1125 Impact Factor 2.749 2016
- 4) Saeed M, Jacob S, Sandjo L.P, Sugimoto Y, Khalid H.E, Opatz T, Thines E, Efferth T. Cytotoxicity of the sesquiterpene lactones neoambrosin and damsine from *Ambrosia maritima* against multidrug-resistant cancer cells *Frontiers in Pharmacology, section Ethnopharmacology* Impact Factor 3.8 6, 267 2015

SUPERVISION OF POSTGRADUATE STUDENTS

• COMPLETED POSTGRADUATE PROJECTS

- 1) **180/85661/12** Okemwa, E.K Phytochemical analysis of surface exudates of some selected plants growing in Kitui district of Kenya for bioactive compounds. 2016 PhD
- 2) **180/80060/08** Beth, N Phytochemical and Biological Investigations on some Croton species in Kenya. 2014 PhD
- 3) **156/75962/14** Owino, J.I Preparation of Functionalized *Tagetes minuta* (TaMi) Dye. 2018 MSc

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|-----|---------------------|---------------|--|-------------|------------|
| 4) | I56/75997/14 | Gacheru, M.M | Phytochemical Investigation of <i>Zanthoxylum paracanthum</i> and <i>Zanthoxylum chalybeum</i> for Cytotoxic Principles Against Drug Sensitive and Multidrug Resistant Leukemia Cancer Cell Lines. | 2018 | MSc |
| 5) | I56/63685/10 | Awas, O.W | The influence of derivatization on the anti-oxidant potency of flavones from Kenyan medicinal plants
The influence of derivatization on the anti-oxidant potency of flavones from Kenyan medicinal plants | 2016 | MSc |
| 6) | I56/67098/13 | Munayi, R.R | Cytotoxicity of extracts of twenty five Kenyan ethnomedicinal plants against drug sensitive and multidrug resistant cancer cells. | 2016 | MSc |
| 7) | I56/81398/12 | Waweru, J.G | Investigating the Industrial Significance of Selected <i>Commiphora abyssinica</i> Gum Resin Components. | 2015 | MSc |
| 8) | I56/70558/11 | Wafula, R.G.M | Phytochemical investigation of <i>Ancistrocladus robertsoniorum</i> for bioactive compounds against protozoal diseases. | 2014 | MSc |
| 9) | I56/70606/11 | Masila V.M | Phytochemical investigation of <i>Harrisonia abyssinica</i> for antiplasmodial and antileishmanial compounds. | 2014 | MSc |
| 10) | I56/64074/10 | Milugo, T.K | Bioassay-guided phytochemical investigation of <i>Rauwolfia caffra</i> and <i>Moringa Oleifera</i> for their anti-tumor properties. | 2013 | MSc |
| 11) | I56/64754/10 | Bunyinza, D | Phytochemical Investigation of <i>Zanthoxylum holstianum</i> for antimicrobial principles. | 2013 | MSc |
| 12) | I56/77604/09 | Macharia, J.M | Phytochemical Investigation of the roots of <i>Tephrosia virosa</i> and the aerial parts of <i>Tephrosia purpurie</i> for anti-plasmodial and mosquito larvicidal activities. | 2012 | MSc |

POST GRADUATE PROJECTS IN PROGRESS

- | | | | | |
|----|---------------------|---------------------------------|--|------------|
| 1) | I0545472018 | Jackson Obegi | Characerization of antiprotozoal principles from selected <i>Suregada</i> and <i>Terminalia</i> species from Kenya | PhD |
| 2) | I80/52552/18 | Vaderament-A Nchiozem-Ngnitedem | Antineoplastic and Antimicrobial Screening of Constituents from four Medicinal Plants from the genus <i>Vernonia</i> | PhD |

3)	I80/54101/2019	Ibrahim Hashim	Phytochemical Studies, Elemental Analysis and Applications of Selected Kenyan Medicinal Plants	PhD
4)		Erick Awas	Phytochemical evaluation of some Anti- Malarial Plants of Kenya	PhD
5)	I84/33290/2014 (KU)	Stanley Tumbo	Screening for Anti-Cancer Activity and Phytochemical Investigation of Ethnomedicinal Plants, <i>Dolichossericeus</i> , <i>Crotalaria lachnocarpoides</i> and <i>Peucedanum elgonense</i>	PhD
6)	I84/32238/2015 (KU)	Joel Mutai	Repellence and acaricidal Properties of Selected Plants of Rhamnaceae Family Against <i>Rhipicephalus appendiculatus</i> Neumann	PhD
7)	I56/7733/2017	Bernard Mwanzia Isaiah	Characterization of telfairia pedata seed kernel oil for nutritional value and antioxidant activity	MSc
8)	I56/7318/2017	Chebet Ngeno Olivia	Induction of Secondary metabolites by endophytic fungi to reduce leafminer attack on the common bean <i>Phaseolus vulgaris</i>	MSc
9)	B523/1118/2017 (Embu Univ)	Teresia Kerubo Simba	Isolation and Characterization of Anticancer Secondary Metabolites from <i>Cola minor</i> Brenan	MSc
10)	B523/1135/2017 (Embu Univ)	Justus Mukavi	Isolation and characterization of Secondary metabolites from <i>Fagaropsis angolensis</i>	MSc
11)	MPS13/70066/15 (Kisii Univ)	Clara Jepkoech	Characterisation of Anti-Canceractive Phytochemicals of the Stem Extracts of <i>Ancistrocladus robertianum</i>	MSc
12)	MPS13/70001/14 (Kisii Univ)	Kepha Okerio	Phytochemical Investigation of the Kenyan <i>Croton sylvaticus</i> and <i>C. macrostachyus</i> for anticancer principles.	MSc
13)	MPS13/70011/14 (Kisii Univ)	Phylis K. Chemutai	Phytochemical Investigation of the leaves, stem and root bark of <i>Spathodea campanulata</i> for cytotoxic principles against drug sensitive and multidrug resistant cancer cell lines.	MSc
14)	MPS13/70008/14 (Kisii Univ)	Lucas Ombongi	Phytochemical Investigation of the stem bark of the Kenyan <i>Tabernaemontana staphiana</i> and the leaves of <i>Strychnos abyssinica</i> for anticancer principles	MSc
15)	MPS13/70007/14 (Kisii Univ)	Martha Omwandho	Phytochemical Investigation of the stem and root bark of <i>Zanthoxylum gillettii</i> for cytotoxic principles against drug sensitive and multidrug resistant cancer cell lines.	MSc

SUPERVISION OF UNDERGRADUATE PROJECTS

• COMPLETED UNDERGRADUATE PROJECTS

- 1) **I20/2106/14** Ombui, H.N Phytochemical Investigation of *Zanthoxylum gillettii* for Anticancer Principles, 2018 **2018**
- 2) **I64/2178/14** Murithi, R.K Isolation, characterization and phytochemical investigation of *Zanthoxylum paracathum* for cytotoxicity principles against drug sensitive and multidrug resistant cancer cell lines, 2018 **2018**
- 3) **I64/5343/14** Kipkoech, W Phytochemical investigation of *Zanthoxylum chalybeum* for cytotoxic principles against drug sensitive and multidrug resistant cancer cell lines **2018**
- 4) **I20/1795/13** Onyango, S.O Using Computational Chemistry to Screen for Potential Lead Compounds in the Malaria Box Against *Plasmodium falciparum* 40S protein S7 and S19 **2016**
- 5) **I20/1768/13** Omollo O.A Virtual Screening Strategy Using S23 and S4 proteins of *Plasmodium falciparum* 40s subunit against Compounds from the Malaria Box **2016**
- 6) **I64/4801/13** Ochieng, W.D Isolation of *Sphaeranthus bullatus* Carvotacetones for Optimization of their Antiplasmodial Activity and Cytotoxicity **2016**
- 7) **I20/1844/12** Obadha, G Phytochemical Investigation of *Zanthoxylum chalybeum* for Secondary Metabolites with Bioactivity against Malignant Tumors **2016**
- 8) **I20/1727/12** Mwakuro D.M Phytochemical Investigation of *Zanthoxylum chalybeum* for Cytotoxic Principles against Drug Sensitive and Multi-Drug Resistant Cancer Cell Lines. **2016**
- 9) **I20/1759/12** Moses O.O Phytochemical Investigation and Anticancer Activities of Biomolecules from the Root Bark of *Zanthoxylum gillettii* **2016**
- 10) **I08/3031/08** Kamau, M.S Phytochemical analysis of the 1:1 MeOH/CH₂Cl₂ extract of the stem bark of *Erythrina abyssinica* **2012**
- 11) **I20/3229/08** Owino, J.I Phytochemical investigation and antimicrobial activities of the crude extract and fractions of *E. abyssinica* stem bark **2012**
- 12) **I08/3028/08** Kabati, C.M Phytochemical analysis and antimicrobial properties of the nut shell liquid **2012**
- 13) **I08/21657/07** Avina, A *Mondia whyti* for flavouring ice-cream and formulating reagents spray **2011**
- 14) **I08/8926/05** Erick, N.N Chemotaxonomic significance of surface exudates compounds from *Dodonaea angustifolia* **2011**
- 15) Ouma, C.A Isolation, characterization and neuroprotective effects of surface exudates flavonoids on *Senecio roseiflorus* **2010**
- 16) **I20/2484/06** Ouma, L.A Surface flavonoids from *S. roseiflorus* and their potential neuroprotective effects **2009**

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|-----|--------------------|--------------|---|-------------|
| 17) | I20/2838/03 | Kitonyi, M.E | Phytochemical analysis of non-polar compounds of <i>D. angustifolia</i> | 2007 |
| 18) | I20/2873/03 | Mutua, M.J | Phytochemical analysis of polar compounds from <i>D. angustifolia</i> from Botswana | 2007 |
| 19) | I20/2764/03 | Mate, P.K | Phytochemical analysis of polar compounds from <i>D. angustifolia</i> from Voi | 2007 |
| 20) | I20/2788/03 | Sangok, C.A | Phytochemical investigation of <i>S. roseiflorus</i> for antiplasmodial and larvicidal activity | 2007 |
| 21) | I20/2632/98 | Omwakwe, O.U | The isolation and characterization of surface compounds from leaves of <i>D. angustifolia</i> | 2002 |
| 22) | I20/2244/97 | Manono, J | Qualitative and quantitative determination of hydroquinones in personal care products | 2001 |

FUNDS MOBILIZATION

- **FOR RESEARCH, INFRASTRUCTURE AND POLICY DEVELOPMENT**

- 1) **04th Jan, 2018-31st December, 2020 from SIDA: \$ 750,000.00** Promoting Smallholder Access to Fungal Biopesticides through Public Private Partnerships in East Africa-PROSAFE
- 2) **14th December, 2017: \$ 553,658.64 National Research Fund (NRF):** Institutional Infrastructure Support. Establishment of Kenya National NMR Centre (KNMRC)
- 3) **2014-2019: \$ 2,600,000 from NPIF,** for collaborative research project entitled; Developing the Microbial Biotechnology Industry from Kenya's Soda lakes in Line with the Nagoya Protocol.
- 4) **2015-2018: SEK 1,650, 000** from International Science Programme, Uppsala University, Sweden (ISP)-International Program in Chemical Sciences (IPICS) for collaborative research in drug discovery from Kenya's biodiversity.
- 5) **2011-2014: SEK 1,247,000.00** from International Science Programme, Uppsala University, Sweden (ISP)-International Program in Chemical Sciences (IPICS) for collaborative research in drug discovery from Kenya's biodiversity.
- 6) **2011-2013: KShs 987,000.00** from National Council for Science and technology, Kenya (NCST)Developing phytomedicine combinations from *Erythrina abyssinica*, *Albizia gummifera* and *Vernonia lasiopous* using Chines Material Medica process'.

- **FUNDS FOR OUTREACH/WORKSHOPS/CONFERENCES**

- 1) **KShs. 150,000** from the College of Biological and Physical Sciences University of Nairobi (CBPS): **26th-30th May, 2014:** Chemistry Open Week: Understanding Chemistry, its uses and applications at the College of Biological and Physical Sciences, University of Nairobi.
- 2) **KShs. 150,000** from the College of Biological and Physical Sciences University of Nairobi (CBPS): **18th-22nd June, 2012:** Chemistry Open Week for Secondary Schools in Nairobi and Environs: Understanding Chemistry, its uses and applications at the College of Biological and Physical Sciences, University of Nairobi.
- 3) **KShs. 150,000** from the College of Biological and Physical Sciences University of Nairobi (CBPS): **22nd-31st March, 2012:** Visit to Girl's and Mixed Secondary Schools in Nairobi county and environs to motivate and mentor female students to develop positive attitude towards chemistry and other

science subjects. This is aimed at attracting the academically gifted female students into the pursuit of chemistry and other science subjects to the institutions of higher learning towards achieving vision 2030.

- 4) DOW Chemicals: **15th-17th February, 2012**: The 2nd conference of the International Year of Chemistry (IYC, 2011) celebrations: Popularizing Chemistry with respect to Vision 2030, at the Central Catering Unit (Opposite the Graduation Square), University of Nairobi, Kenya.
- 5) National Council for Science Technology and Innovation (NACOSTI): **15th-17th February, 2012**: The 2nd conference of the International Year of Chemistry (IYC, 2011) celebrations: Popularizing Chemistry with respect to Vision 2030, at the Central Catering Unit (Opposite the Graduation Square), University of Nairobi, Kenya.
- 6) Royal Society of Chemistry through the Pan African Chemistry Network (PACN): **15th-17th February, 2012**: The 2nd conference of the International Year of Chemistry (IYC, 2011) celebrations: Popularizing Chemistry with respect to Vision 2030, at the Central Catering Unit (Opposite the Graduation Square), University of Nairobi, Kenya.
- 7) Organization for Prohibition of Chemical Weapons (OPCW): **3rd-10th December, 2013**: The 15th NAPRECA workshop and Symposium; Natural Products Discovery- Focus on the ever increasing African Health care needs, Khartoum, Sudan. **8th-12th August, 2011**: The 14th NAPRECA Symposium and AAMPS Ethnoveterinary Medicine Symposium, ICIPE, Kenya.

- **SCHOLARSHIPS AWARDS**

- 1) **Best Poster Presentation**: First joint IOCD-ISDNP international symposium on natural products, 25-29th February **2008**, Kasane, Botswana-
- 2) **Best Poster Presentation**: **22nd-26th July, 2007**: 12th NAPRECA Symposium on Natural products, Theme: The Discovery of Bio-active molecules from East African Flora and Fauna, Hotel Africana, Kampala, Uganda.
- 3) The **WHO/MIM** at **ICIPE**, Tropical Insect Science for Development-**2002**.
- 4) The German Academic Exchange Service (DAAD) Research Fellowship-**1999**.

DONOR RELATIONSHIPS

- **MAJOR INFRASTRUCTURE ACCOMPLISHMENT**

- 1) **SEK 800,000**- 400 MHz NMR Machine-Collaborative research in drug discovery from Kenya Flora with special emphasis on infectious diseases and anticancer agents.
- 2) **SEK 460,000**- HPLC Machine-Collaborative research in drug discovery from Kenya Flora with special emphasis on infectious diseases and anticancer agents.

- **INITIATED PARTNERSHIPS**

- 1) A Cooperative Research and Development Agreement between the University of Nairobi P.O. Box 301, 00100-GPO Nairobi, Kenya (Cooperator) and Walter Reed Army Institute of Research 503, Robert Grant Avenue Silver Spring, MD 20910-7500 (Laboratory.) "Antimalarial screening of Kenyan ethnomedicinal plants".
- 2) MOU between Department of Chemistry, University of Nairobi, Kenya and Department of Pharmaceutical Biology, Johannes Gutenberg University, Mainz, Germany. Exploring the Potential of Compounds from Kenyan traditional plants against Cancer.

- **POLICY DOCUMENT DEVELOPMENT**

- 1) **January 2015:** Kenyas Obligations under the Nagoya Protocol; the road towards Domestication of the effective ABS laws
- 2) **2015:** Reviewing the Constitution of the Kenya Chemical Society (**KCS**)
- 3) **2014:** Curricular Development for Garissa University College
- 4) **2014:** Health Bill and Policy document through the Association of Professional Societies of East Africa (**APSEA**)

RESEARCH COLLABORATIONS

• INTERNATIONAL COLLABORATIONS

- 1) **Nagoya Protocol Implementation Fund (NPIF) PROJECT:** Developing the Microbial Biotechnology Industry from Kenya's Soda lakes in Line with the Nagoya Protocol
 - Verenium
 - BASF
 - United Nations Environmental Programme, Division of Environmental Laws and Conventions (**UNEP-DELIC**)
 - Global Environmental Facility (**GEF**)
- 2) **Professor Dr. Thomas Efferth**, Chair, Department of Pharmaceutical Biology, Institute of Pharmacy and Biochemistry, Johannes Gutenberg University, Staudinger Weg 5, 55128 Mainz, Germany, Exploring the Potential of Compounds from Kenyan traditional plants against Cancer. E-mail, efferth.uni-mainz.de.
- 3) **Prof. Victor Kuete**, Department of Biochemistry, Faculty of Science, University of Dschang, P.O. Box 1499 Bafoussam, Cameroon. Collaborative research in drug discovery from Kenya Flora with special emphasis on infectious diseases and anticancer agents E-mail: kuetevictor@yahoo.fr. victor.kuete@univ-dschang.org.
- 4) **Professor Mate Erdelyi**, Department of Chemistry and Molecular Biology, University of Gothenburg (GU) and at the Swedish NMR Centre, Sweden, Collaborative research in drug discovery from Kenya Flora with special emphasis on infectious diseases and anticancer agents, E-mail, mate.erdelyi@chem.gu.se.
- 5) **Dr. Matthias Heydenreich**, Institut für Chemie, Universität Potsdam, P.O. Box 60 15 53, D-14415 Potsdam, Germany. Analysis of compounds isolated from the Natural Products Group, E-mail, mate@chem.gu.se.
- 6) **Prof. Dulcie Mulholland**, Department of Chemistry, FEPS, University of Surrey, Guildford, Surrey, GU2 7XH, United Kingdom. Analysis of compounds isolated from the Natural Products Group E-mail m.langat@surrey.ac.uk.
- 7) **Dr. Moses Langat**, Department of Chemistry, FEPS, University of Surrey, Guildford, Surrey, GU2 7XH, United Kingdom. Analysis of compounds isolated from the Natural Products Group E-mail m.langat@surrey.ac.uk.

• LOCAL COLLABORATORS

- 1) **NPIF PROJECT:** Developing the Microbial Biotechnology Industry from Kenya's Soda lakes in Line with the Nagoya Protocol;
 - Ministry of Environment Water and Natural Resources
 - Kenya Wildlife services (**KWS**)
 - Jomo Kenyatta University of Agriculture and Technology (**JKUAT**)
 - Moi University (**MU**)
 - Rivatex East Africa Limited

- The Kenya Industrial Research and Development Institute (**KIRDI**)
 - Biochemistry Department, **UoN**
- 2) **MTAFITI** Bioprospecting
 - Kenya Marine and Fisheries Research Institute (**KEMFRI**)
 - 3) **ISP-KEN-02 PROJECT:** Drug discovery from Kenya's biodiversity
 - **Prof. Jacob. O. Midiwo**, Department of Chemistry, University of Nairobi, P. O. Box 30197-00100, Nairobi, Kenya, email, jmidiwo@uonbi.ac.ke.
 - **Prof. AbiyYenesew**, Department of Chemistry, University of Nairobi, P. O. Box 30197-00100, Nairobi, Kenya, email, ayenesew@uonbi.ac.ke.
 - **Dr. Solomon Derese**, Department of Chemistry, University of Nairobi, P. O. Box 30197-00100, Nairobi, Kenya, email, jmidiwo@uonbi.ac.ke
 - 4) **Dr. Hastings S. Ozwara**, Department of Tropical and infectious Diseases, Institute of Primate Research, P.O.Box 24481, 00502, Karen, email Kamonya2002@yahoo.co.ke. Developing phytomedicine combinations from *Erythrina abyssinica*, *Albizia gummifera* and *Vernonia lasiopous* using Chinese Material Medica process'.
 - 5) **Mr. Hosea M. Akala**, United States Army Medical Research Unit-Kenya, Walter Reed Project, Kisumu, MRU 64109, APO, AE 09831-4109, USA. "Antimalarial screening of Kenyan ethnomedicinal plants".
 - 6) **Dr. Beatrice Amugune**, Department of Pharmacy, University of Nairobi, P. O. Box 30197-00100, Nairobi, Kenya, email, bamugune@yahoo.co.uk. Anitimicrobial potential of Kenyan medicinal plants.
 - 7) **Dr. Joel W Ochieng**, Center for Biotechnology and Bioinformatics, University of Nairobi, P. O. Box 30197-00100, Nairobi, Kenya, email, jochieng@uonbi.ac.ke.
 - 8) **Prof. Francis Mulaa**, Department of Biochemistry, University of Nairobi, P. O. Box 30197-00100, Nairobi, Kenya, email, fjmulaa@gmail.com

PAPERS PRESENTED IN CONFERENCES, SEMINARS, WORKSHOPS AND OTHER GATHERINGS

• PUBLICATIONS IN BOOK OF PROCEEDINGS AND ABSTRACT

- 1) **3rd-7th September, 2018:** Cytotoxicity of Plumbagin, Rapanone and 12 other naturally occurring Quinones from Kenyan Flora towards human carcinoma cells, Chemistry for industrialization, sustainable development, safety and Security in Africa, 12th Theoretical Chemistry Conference in Africa (TCCA) (ESA ECC-TCCA), Conference, Reef Hotel, Mombasa, Kenya.
- 2) **8th-10th February, 2018:** Cytotoxicity of Plumbagin, Rapanone and 12 other naturally occurring Quinones from Kenyan Flora towards human carcinoma cells, Utilization of Natural Products for the Betterment of Livelihood of Mankind, AICAD, JKUAT, Kenya.
- 3) **10th-14th September, 2017:** Cytotoxicity of Plumbagin, Rapanone and 12 other naturally occurring Quinones from Kenyan Flora towards human carcinoma cells, Research Link Workshop, Exploring Kenyan Biodiversity: Chemistry, Pharmacology and Commercialization. Great Rift Valley Lodge, Naivasha, Kenya.
- 4) **13th-16th August, 2017:** Cytotoxicity of Plumbagin, Rapanone and 12 other naturally occurring Quinones from Kenyan Flora towards human carcinoma cells, 17th NAPRECA Symposium in Addis Ababa, Ethiopia.

- 5) **9th-12th May, 2017:** Cytotoxicity of Plumbagin, Rapanone and 12 other naturally occurring Quinones from Kenyan Flora towards human carcinoma cells, 9th International Conference of the Kenya Chemical Society, United States International University (USIU), Nairobi, Kenya.
- 6) **15th-17th June, 2016:** Antibacterial Activity and Structure-Activity Relationships of a Panel of 48 Compounds from Kenyan Plants against Multidrug Resistant Phenotypes, East and Southern Africa Environmental/Analytical Chemistry Conference (ESAECC)-11th Theoretical Chemistry Conference in Africa (TCCA) (ESAECC-TCCA), Conference, Reef Hotel, Mombasa, Kenya.
- 7) **6th-8th April, 2016:** Antimicrobial Activities of Compounds from *Dodonaea angustifolia* and *Thespesia garkeana*. Humboldt Kellogg Conference 2016. Theme: Research and Networking: Laying the Foundation for the Sustainable Development Goals. Naivasha, Kenya
- 8) **31st August-3rd September, 2015:** Antimicrobial flavonoids and diterpenoids from *Dodonaea angustifolia*. 16th NAPRECA Symposium. Arusha, Tanzania. <http://www.napreca-tz.org/16napreca/>.
- 9) **3rd-10th December, 2013:** Relationship between antioxidant and antiplasmodial activities of compounds from *Dodonaea angustifolia* and *Senecio roseiflorus*. **Kerubo, L. O**, Midiwo, J. O, Akala, H. M. The 15th NAPRECA workshop and Symposium; Natural Products Discovery-Focus on the ever increasing African Health care needs, Khartoum, Sudan.
- 10) **9th-11th October, 2013:** Relationship between antioxidant and antiplasmodial activities of compounds from *Dodonaea angustifolia* and *Senecio roseiflorus*. **Kerubo, L. O**, Midiwo, J. O, Akala, H. M. 6th MIM Pan-African Malaria Conference 2013; Moving towards Malaria elimination: Investing in Research and Control, International Conference Centre (ICC), Durban, South Africa.
- 11) Phytochemical investigation of surface exudates of *Dodonaea angustifolia* for *in vitro* antiplasmodial and mosquito larvicidal activity. **Leonidah K. Omosa**, Jacob O. Midiwo, Solomon Derese, Abiy Yenesew, Martin G. Peter, Matthias Heydenreich, Akala, H.M., Eyase, F., Waters, N.C. and Kabaru, J. The 13th NAPRECA symposium, Kinshasa, D.R. Congo, August 10-14, **2009**.
- 12) **25-29th February, 2008:** Phytochemical investigation of surface exudates of *Dodonaea angustifolia* for *in vitro* antiplasmodial and mosquito larvicidal activity. **Kerubo, L. O**, Midiwo, J. O, Peter, M. G and Matthias, H. Book of Abstracts of the First joint IOCD-ISDNP international symposium on natural products, Kasane, Botswana.
- 13) **25-29th February 2008:** The search for anti-malarial principles from Kenyan plants. Jacob O. Midiwo, Abiy yenesew, Solomon Derese. Book of Abstracts of the First joint IOCD-ISDNP international symposium on natural products, Kasane, Botswana.
- 14) **November, 2006:** Bioactive compounds from popular Kenyan medicinal plants. Midiwo J. O. A. Yenesew, B.F. Juma, S, Derese, J. **L. Kerubo**. 5th ANRAP International Seminar-22nd MNPS Annual Seminar, Kuala Lumpur, Malaysia
- 15) Phytochemical evaluation of Kenyan medicinal plants. J. O. Midiwo, A.Yenesew, S. Derese, **Kerubo L. Omosa**, D. Mutisya, I. W. Kimiti. (**2005**). Book of Abstracts of the 11th NAPRECA Symposium, Antananarivo, Madagascar.
- 16) Surface exudate compounds from some Kenyan medicinal plants: Antioxidant potential of the non-polar flavonoids. Jacob O. Midiwo, Yenesew, A., Derese, S. and **Kerubo, L**, **2003**.
- 17) Phytochemical Studies on Popular Kenyan Medicinal Plants. J.O. Midiwo, A. Yenesew, B.F. Juma, Solomon Derese, J.A. Ayoo, A.O. Aluoch, **Kerubo, L.** and S. Guchu (**2001**). Book of Abstract of the IOCD International Symposium, Bamako, Mali.

CONFERENCES/SYMPOSIA AND PROFESSIONAL MEETINGS ATTENDED

- 1) **29th September, 2017:** NAPREKA (K) Stakeholders Meeting, Chemistry Department, University of Nairobi, Nairobi, Kenya
- 2) **25-27th January, 2017:** "Innovative Post-Graduate Supervision; Egerton University KDSA Chapter Workshop; CMRT, Egerton University.
- 3) **9th April, 2016:** Round 1 Mentorship for 2nd Year Chemistry Students, Basic Course Requirement for Majoring in Chemistry, LLT Chiromo Campus
- 4) **26th February, 2016:** Round 1 Mentorship for 3rd and 4th Year Chemistry Students; The Dos and Dents of Interviews, LLT Chiromo Campus
- 5) **4th June, 2014:** Public Lecture on main functions of the organization for prohibition of chemical Weapons (OPCW) and funding opportunities, by H.E. MS Grace Asirwathan, Deputy Director General, OPCW, at School of Physical Sciences Boardroom (SPS).
- 6) **31st March, 2014:** The Royal Society of Chemistry (RSC) and Procter and Gamble (P&G) awareness campaign for collaboration opportunities by Dr. Alejandra Palerma, Dr. Hellen Bailey, Dr. Raffaele Scocciati at the School of Physical Sciences Boardroom (SPS), College of Biological and Physical Sciences (CBPS), University of Nairobi (**UoN**), Kenya.
- 7) **25th February, 2014:** Kenya Chemical Society AGM/Workshop, School of Physical Sciences Boardroom (SPS), College of Biological and Physical Sciences (CBPS), University of Nairobi (**UoN**), Kenya.
- 8) **21st February, 2014:** Sensitization on Performance Contract and Performance Appraisal, Training Programme, School of Physical Sciences Boardroom (SPS), College of Biological and Physical Sciences (CBPS), University of Nairobi (**UoN**), Kenya.
- 9) **3rd-10th December, 2013:** The 15th NAPRECA workshop and Symposium; Natural Products Discovery- Focus on the ever increasing African Health care needs, Khartoum, Sudan.
- 10) **9th-11th October, 2013:** 6th MIM Pan-African Malaria Conference 2013; Moving towards Malaria elimination: Investing in Research and Control, International Conference Centre (ICC), Durban, South Africa.
- 11) **5th-7th December, 2012:** Natural Products Research for Eastern and Central Africa (NAPRECA) workshop in Bronte Hotel, Harare, Zimbabwe.
- 12) **17th-20th July, 2012:** The future of biodiversity research in Africa: Scope, opportunities, collaboration, access and benefit sharing (ABS), Taita Taveta University College (TTUC), Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya.
- 13) **15th-17th February, 2012:** The 2nd conference of the International Year of Chemistry (IYC, 2011) celebrations: Popularizing Chemistry with respect to Vision 2030, at the Central Catering Unit (Opposite the Graduation Square), University of Nairobi, Kenya.
- 14) **3rd-8th October, 2011:** AFASSA International Symposium on Natural Products and their Application in Health and Agriculture, Kandy, Sri Lanka.
- 15) **8th-12th August, 2011:** The 14th NAPRECA Symposium and AAMPS Ethnoveterinary Medicine Symposium, ICIPE, Kenya.
- 16) **24th-26th November, 2010:** 1st Alexander Von Humboldt Alumni Kenyan Kelleg Conference. Theme, Synergy and Networking to enhance research and development, Meridian Court Hotel, Nairobi, Kenya.
- 17) **18th-20th August, 2010:** African Women in Science and Engineering (AWSE) Conference. Theme a Decade into the 21st Century; the Contribution of African Women Scientists and Engineers, Kenya School of Monetary Studies.
- 18) **1st-4th September, 2009:** Regional and Interregional Cooperation to Strengthen Basic Sciences in Developing Countries, United Nations Conference Centre (UNCC), Addis Abba, Ethiopia.

- 19) **10th-14th August, 2009:** 13th Symposium of NAPRECA. Theme: Drug discovery from African Rainforest, Memling Hotel, Kinshasa, DR. Congo.
- 20) **25th June, 2009:** Sustainable Water Conference, University of Nairobi, Nairobi, Kenya.
- 21) **11th-12th June, 2009:** Kenya DAAD Scholars Association (KDSA), National Conference on Science and Technology for Development, Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kenya.
- 22) **20th-22nd May, 2009:** National R&D Journal Stakeholders' Forum, Kenya International Conference Centre (KICC).
- 23) **10th-12th September, 2008:** Biodiversity Conference, Chiromo Campus, University of Nairobi Nairobi, Kenya.
- 24) **23rd-29th February, 2008:** 1st Joint **IOCD-ISDNP** International Symposium on Natural Products. Theme: Natural Products: Unlimited resources for the Development of Drugs, cosmetics and food. Mowana Safari Lodge Kasane, Botswana.
- 25) **22nd-26th July, 2007:** **12th NAPRECA** Symposium on Natural products, Theme: The Discovery of Bio-active molecules from East African Flora and Fauna, Hotel Africana, Kampala, Uganda.
- 26) **2nd-7th August, 2004:** The 9th International Chemistry Conference in Africa (ICCA). Theme: Chemistry towards Disease and Poverty Eradication.

EXAMINATION OF POSTGRADUATE THESES

- 1) **Owino, J.I:** Preparation of Functionalized *Tagetes minuta* (TAMI) dye nanoparticles, M.Sc, **10th October, 2018.**
- 2) **Kiganda, I:** Phytochemical Investigation of *Alstonia boonei* and *Schizogygia coffaeoides* for anticancer principles, M.Sc, **29th August, 2018.**
- 3) **Gacheru, M.M:** Phytochemical Investigation of *Zanthoxylum paracanthum* and *Z. chalybeum* for cytotoxic principles against drug sensitive and multidrug resistant leukemia cancer cell lines, M.Sc, **21st March, 2018**
- 4) **Mwangi, M.N:** Diet and Feeding behavior of the Red-capped lark, *Calandrella cinerea* in Kedong Ranch, Naivasha, Kenya, M.Sc, **7th December, 2017.**
- 5) **Musila, F.M:** Molecular Phylogeny, leaf micromorphology and antimicrobial activity of phytoconstituents of Kenyan *Plectranthus* species in the Coleus Clade, PhD, **30th November, 2017.**
- 6) **Muthoni, M.L:** Effects of soil types on fruit traits, seedling growth and biomass production of *Solanum incanum* in Kiambu and Nairobi counties, Kenya, **24th May, 2017.**
- 7) **Katua, M.R:** Role of fruit bat Eidolon helvum and avian frugivores in Guava seed dispersal and plant regeneration within farmlands in Vihiga, Western, Kenya, M.Sc, **22nd February, 2017.**
- 8) **Njeri, M.C:** The impact of elephants (*Loxodonta africana*) on *Acacia tortilis* woodlands in Tsavo East National Park, Kenya, M.Sc, **23rd November, 2016.**
- 9) **Ghebremariam, H.F:** Opulation distribution, genetics and conservation of African Wild Ass (*Equus africanus somalensis*) in Denkelia Eritrea, **22nd June, 2016.**
- 10) **Maina, D.N:** Bio-Shields, Wave energy reduction and sediments stabilization by mangroves in Gazi bay, Kenya, M.Sc, **20 th April, 2016.**
- 11) **Munayi, R.R:** Cytotoxicity of extracts of twenty five Kenyan ethnomedicinal plants against drug sensitive and multidrug resistant cancer cells, M.Sc, **20th January, 2016.**
- 12) **Wafula, R.G:** Phytochemical Investigation of *Zanthoxylum gillettii* (Rutaceae) for active biomolecules against protozoal diseases, M.Sc, **17th September, 2014.**
- 13) **Masila, V.M:** Phytochemical investigation of *Harrisonia abyssinica* for antiplasmodial and antileishmanial compounds, M.Sc, **20th August, 2014.**

- 14) **Milugo T.K:** Bioassay-guided phytochemical investigation of *Rauwolfia caffra*, *Ozoroa insignis*, *Syzygium guineense*, *Tylophora sylvatica* and *Ozoroa insignis* for their anti-tumor properties, **20th September, 2013**
- 15) **Maitethia, D.M:** Automatic detection and classification of plasmodium parasites in stained thin blood smear images, **18th September, 2013**
- 16) **Karambu, E.M:** Ethnobotanical use and Phytochemical analysis of *Cyperus articulatus* from Tharaka, Meru, county, **21st November, 2012.**
- 17) **Nelson Khan:** Screening of Cellulosomes in Enviromental Metagenomes, **25th May, 2012.**
- 18) **Esther M.N:** Distribution and population structure of *Prunus africana* in Mt. Kenya forest, **30th November, 2011.**
- 19) **Lucky, S.M:** Phytochemical Investigation of *Psiadia punctulata* for analgesic agents, **16th November, 2011.**

ADMINISTRATIVE EXPERIENCE

• FACULTY AND DEPARTMENTAL RESPONSIBILITIES

- 1) Performance Contracting Champion, Chemistry Department, **UoN.**
- 2) Student Mentorship Committee; Class Mentor for 3rd Year Chemistry Students, Chemistry Department, **UoN.**
- 3) Income Generation, Innovation and Partnership committee, Chemistry Department, **UoN.**
- 4) Member timetabling committee, Chemistry Department, **UoN.**
- 5) Member of Publications and Brochure Committee of the College of Biological and Physical Sciences (**CBPS**), **UoN.**
- 6) Assistant Chairman of Welfare Committee, Chemistry Department, **UoN.**
- 7) Committee member in the Chamomile project, Chemistry Department, **UoN**
- 8) Teaching and supervision of B. Sc research projects.
- 9) Teaching M.Sc student.
- 10) Supervision of Ph.D and M.Sc research projects.

• FACULTY AND DEPARTMENTAL OUTREACH PROGRAMMES

- 1) **26th-30th May, 2014:** Chemistry Open Week: Understanding Chemistry, its uses and applications at the College of Biological and Physical Sciences, University of Nairobi.
- 2) **18th-22nd June, 2012:** Chemistry Open Week: Understanding Chemistry, its uses and applications at the College of Biological and Physical Sciences, University of Nairobi.
- 3) **22nd-31st March, 2012:** Visit to Girl's and Mixed Secondary Schools in Nairobi county and environs to motivate and mentor female students to develop positive attitude towards chemistry and other science subjects. This is aimed at attracting the academically gifted female students into the pursuit of chemistry and other science subjects to the institutions of higher learning towards achieving vision 2030.
- 4) **14th December, 2011:** Mentorship for 1st year female students of College of Biological and Physical Sciences (CBPS), UoN, by female lecturers from CBPS initiated by (WIC).
- 5) **19th January, 2011:** Women in Chemistry (WIC) breakfast in the International Year of Chemistry-Organizing secretary.
- 6) **14th December, 2010:** Mentorship for 1st year female students of College of Biological and Physical Sciences (CBPS), UoN, by female lecturers from **CBPS** initiated by (WIC).

• EXECUTIVE POSITIONS AND RESPONSIBILITIES

- 1) Pan Africa Chemistry Network (**PACN**) Local Management Committee (LMC) in Kenya (2018)
- 2) Treasurer, Natural Product Research Network for East and Central Africa (**NAPRECA (K)**) (2018)
- 3) Treasurer, Universities Academic Staff Union, University of Nairobi Chapter-**UASU-UoN** Chapter (2016)
- 4) Board Member, Jemovo Secondary School, Vihiga County, Kenya.
- 5) Council Member of the Association of Professional Societies in East Africa (**APSEA**).
- 6) Committee Member of the Kenya Project on Chemical Safety and Security (**KPCSS**).
- 7) National Deputy Secretary of the Kenya Chemical Society (**KCS**).
- 8) Secretary, Kenya DAAD Scholars Association (**KDSA**)-**UoN** Chapter.
- 9) Treasurer, Chiromo Campus Club (**CCC**) (Academic Staff of the **UoN** Welfare Club).
- 10) Secretary, Welfare Committee, Parklands staff residence, **UoN**.
- 11) Local Organizing Committee Member of **NAPRECA**, Pan African Chemistry Network (**PACN**), International Year of Chemistry, 2011 (**IYC-2011**).
- 12) Organizing Secretary, Women in Chemistry (**WIC**), **UoN**.

MEMBERSHIP OF LEARNED PROFESSIONAL BODIES

- 1) The Kenya Chemical Society (**KCS**).
- 2) Kenya DAAD Scholars Association (**KDSA**)
- 3) Natural Product Research Network for East and Central Africa (**NAPRECA (K)**)

COURSES AND TRAINING ATTENDED

- 1) **18th-20th July, 2018:** Bioinnovate Africa Bio-business acceleration boot camp, Lukenya Gateway
- 2) **20th October, 2014 to 20th January, 2015:** Laboratory training in carrying out anticancer Assays against extracts and compounds from Plants at the Institute of Pharmacy and Biochemistry, Johannes Gutenberg University, Mainz, Germany, <http://www.pharmazie.uni-mainz.de/Ak-Efferth/102.php>.
- 3) **23rd May 2013:** The Kenya Project on Chemical Safety and Security stakeholder's workshop at Laico Regency Hotel, Nairobi, Kenya.
- 4) **18th January 2013:** Career success of women scientists and engineers through innovative programs and strategies by COACH director, Prof. Geri Richmond, Chiromo Campus, University of Nairobi, Kenya.
- 5) **26th-30th November, 2012:** Pharmacometrics Course & Drug Discovery Simulation Workshop in Harare, Zimbabwe.
- 6) **4th -10th November, 2012:** 1st Pan-African Summer School in Nanomedicine, Pretoria South Africa.
- 7) **1st-5th August, 2011:** The 14th NAPRECA Pre-Symposium Workshop on Organic synthesis, spectroscopy, introduction to taxonomy, antioxidant, antimicrobial, mosquito larvicidal assays at the School of Physical Sciences, College of Biological and Physical Sciences, University of Nairobi.
- 8) **16th-20th March, 2010:** Global Institute for Bioexploration (Gibex) Screens to Nature, School of Pharmacy, University of Nairobi, Kenya.
- 9) **24th-27th February, 2010:** Intellectual Property (IP) Workshop for researchers in R&D institutions, Lukenya Gateway hotel, Machakos, Kenya.

- 10) **2nd-6th November, 2009:** 7th Advanced Training Program of Research and Development of Medicinal Plants for African Countries by Tianjin University of Chinese Traditional Medicine, University of Nairobi, Kenya.
- 11) **3rd-8th August, 2009:** 13th NAPRECA Pre-Symposium Workshop on Modern Methods of Structural Analysis of Natural Products; New Trends in Chromatographic Separation Techniques and Herbal Products: for Health and Beauty, University of Kinshasa, DR Congo.
- 12) **17th-21st July, 2007:** 12th NAPRECA Pre-Symposium Workshop on NMR, Separation Techniques and Taxonomy, Makerere University, Kampala, Uganda.
- 13) **4th-8th April, 2005:** NAPRECA summer school, Potential of African Plants in Malaria Control, Department of Chemistry, University of Nairobi, KEMRI and ICIPE, Nairobi, Kenya.
- 14) **12th-17th December, 2005:** DIES-Seminar: Two-Part Intensive Course on "Proposal Writing for Intellectual Research Projects" by DAAD, Silver Springs Hotel, Nairobi, Kenya.

CONFERENCE AWARDS

- 1) **25th -29th February, 2008:** Certificate of Excellence for the best poster, at the First Joint **IOCD-ISDNP** International Symposium on Natural Products. Mowana Safari Lodge, Kasane, Botswana.
- 2) **22nd-26th July, 2007:** Certificate of Excellence awarded for the best poster, at the 12th **NAPRECA** Symposium on Natural products held in Kampala, Uganda.

REFEREES

- Academic referee:

Name and title: Prof. Jacob O. Midiwo
Designation: Professor
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E-mail address: jmidiwo@uonbi.ac.ke
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Nature of relationship: Ph.D research supervisor and mentor.

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- Professional referee 3

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