

CURRICULUM VITAE

Prof. Charles Mutai

CONTACT INFORMATION

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ACADEMIC QUALIFICATIONS

- 2009: WHO/TDR postdoctoral training at Chinese Academy of Science, Center for Drug Screening, Shanghai, China.
- 2004: Doctor of Philosophy in Pharmacognosy (Excellent), Dept. Pharmacy, Division of Pharmacognosy, University of Athens, Greece.
- 1996: Master of Science in Pharmacology, Dept. Pharmacology, University of Liverpool, U.K.
- 1994: Bachelor of Science in Biochemistry (Hon), University of Nairobi, Kenya.

RESEARCH INTERESTS

- Drug metabolism and toxicology in drug discovery and development.
- High-throughput screening (HTS) with focus on hit-to-lead activities against a range of neglected diseases, including schistosomiasis and tuberculosis.
- Research and innovation with particular focus on phytomedicines: Ethnomedical, phytochemical, Pharmacological and toxicological evaluation of medicinal plants.
- Promotion of conservation and sustainable safe use of medicinal plants and traditional medicines.
- Medicines management, distribution and rational use.

RESEARCH AND PUBLICATIONS.

1. Aaron Mungiria, Simon Karanja, Lawrence Muthami, **Charles Mutai**. Prevalence and Factors Associated With Herbal Medicine Use among HIV Positive Patients on Highly Active Antiretroviral Therapy in Selected Hospitals in Nairobi County. *Journal of Biology, Agriculture and Healthcare*, 2019, 9(4), pg 88-107. ISSN 2224-3208
2. Georgine Jebet Kemboi, John F. Obiri, **Charles C. Mutai**. Knowledge, Attitudes and Socio-Cultural Practices that Influence the Control of Cervical Cancer among Women in Uasin Gishu County, Kenya. *International Journal of Social Science and Humanities Research*, 2018, 6(3), pg 553-562. ISSN 2348-3164

3. Georgine Kemboi, John Obiri, **Charles Mutai**. Knowledge, Awareness of Cervical Cancer among Women in Uasin Gishu County, Kenya. . *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, **2018**, 41(1), 167-180. ISSN 2307-4531
4. Wekesa J, Okoth J, **Mutai C**, Arudo J. The Contribution of Healthcare Workers' Knowledge on Use of Integrated Palliative Care Approach in the Management of Chronic and Life Threatening Diseases at Kakamega County Referral Hospital, Kenya. *World Scientific Research*, **2018**, vol. 5(1), pages 24-31.
5. Lucia Keter, Richard Too, Nicholas Mwikwabe, **Charles Mutai**, Jennifer Orwa, Lizzy Mwamburi, Stanley Ndwigah, Christine Bii, Richard Korir. Risk of Fungi Associated with Aflatoxin and Fumonisin in Medicinal Herbal Products in the Kenyan Market. *The Scientific World Journal*. **2017**, (2017), 1-6.
6. Lois M. Muiva-Mutisya, Yoseph Atilaw, Matthias Heydenreich, Andreas Koch, Hoseah M. Akala, Agnes C. Cheruiyot, Matthew L. Brown, Beatrice Irungu, Faith A. Okalebo, Solomon Derese, **Charles Mutai**, Abiy Yenesew. Antiplasmodial prenylated flavanonols from *Tephrosia subtriflora*. *Natural Product Research*, **2017**, 1-8.
7. Muthaura CN, Keriko JM, **Mutai C**, Yenesew A, Heydenreich M, Atilaw Y, Gathirwa JW, Irungu BN, Derese S. "Antiplasmodial, Cytotoxicity and Phytochemical Constituents of Four Maytenus Species Used in Traditional Medicine in Kenya." *The Natural Products Journal*. **2017**;7(2):144-152.
8. F.N. Kinoti, **C Mutai**, P Wanzala, S.M. Karanja Factors associated with infant feeding practices and nutritional status among children aged 6-24 months attending child welfare clinics in Kajiado Sub-County. *East African Medical Journal*, **2016**, 93(8), 348-353
9. Sally Jepkosgei Kiptoo, **Charles Mutai** and Mary Kipmerewo. Male partner involvement on maternal care services during perinatal period in Mumias East and West sub counties, Kakamega County, Kenya. *Int. J. Adv. Res.*, **2016**, 4(11), 1219-1232.
10. Ameldah Barasa, **Charles Mutai** and Mary Kipmerewo. Effects of emergency obstetrics and neonatal care training on maternal and perinatal outcomes: Kakamega County, Kenya. *Int. J. Adv. Res.*, **2016**, 4(11), 1204-1218.
11. Ambetsa M. Weche, Wakhungu W. Jacob, **Mutai Charles**, Omon Grace. Effect of age at pregnancy on pregnancy outcomes among child bearing women in Kakamega County, Kenya. *Global Scholastic Research Journal of Multidisciplinary*, **2016**, 2(8), 22-35, Online ISSN: 2349-9397.
12. Millicent Ambetsa, Jacob Wakhungu, **Charles Mutai**, Grace Omoni. Contributing Factors to Late Age Pregnancy and its Outcome Among Elderly Primigravidas in Kakamega County, Kenya. *American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS)*, **2016**, 26(2), 154-164.
13. J.Mutuma, J.Wakhungu, **C.Mutai**. The socio economic effect of cancer on patients' livelihoods in kenyan households. *BIBECHANA* 14 (2017) 30-36: RCOST p.38 (Online Publication: Dec., 2016) ISSN 2091-0762
14. James Mutuma Gitonga, Jacob Wakhungu, **Charles Mutai**. Socio-Economic And Demographic Factors Influencing Cancer Awareness and Screening Uptake in Kenya. *International Journal of Innovative Research and Advanced Studies (IJIRAS)*, **2016**, 3(8), 346-351.

15. Winnie Mungai, Gideon Kikuvi, Peter Wanzala, **Charles Mutai**. Factors Associated with Uptake of Cervical Cancer Screening among Women Aged 18-49 Years in Njiru Sub-County, Nairobi, Kenya. *Journal of Biology, Agriculture and Healthcare*, **2016**, 6(6), 74-86.
16. Lucia Keter, Richard Too, **Charles Mutai**, Nicholas Mwikwabe, Stanley Ndwigah, Jennifer Orwa, Elizabeth Mwamburi and Richard Korir. Bacteria Contaminants and their Antibiotic Sensitivity from Selected Herbal Medicinal Products from Eldoret and Mombasa, Kenya. *American Medical Journal*, **2016**, 18-28.
17. Wycliffe Manyulu Clement, **Charles Mutai**, Anne Mutsami. Effects of Diabetes Mellitus in Prediction of Its Management in Kakamega County. *International Journal of Recent Research in Life Sciences (IJRRLS)*, **2016**, 3(1), 40-43.
18. Wycliffe Manyulu Clement, **Charles Mutai**, Anne Mutsami. Factors Influencing Occurrence of Diabetes Mellitus in Shieywe Location Kakamega County: A Cross-Sectional Study. *International Journal of Recent Research in Life Sciences (IJRRLS)*, **2016**, 3(1), 34-39.
19. Nyakiiru M. Gichuki, Mohamed Karama, Zipporah Ng'ang'a, **Charles Mutai**. Contextual Factors Influencing Provision Of Emergency Medical Services In Nairobi, Kenya. *Researchjournal's Journal of Public Health*, **2015**, 1(9), 1-11.
20. Mary Kipmerewo, Wilfrida C. Bore and **Charles Mutai**. Adherence to Anti-Retroviral Therapy among Adult Patients with HIV Attending the Comprehensive Care Centre in Kakamega County *Prime Journal of Social Science*, **2015**, 4(10), 113—1139.
21. Muthaura CN, Keriko JM, **Mutai C**, Yenesew A, Gathirwa JW, Irungu BN, Nyangacha R, Mungai GM, Derese S. Antiplasmodial potential of traditional phytotherapy of some remedies used in treatment of malaria in meru-tharaka nithi county of kenya. *J Ethnopharmacol*. **2015**, 142-2.
22. Pascaline Jeruto, Ruth Nyangacha, **Charles Mutai**. In vitro and in vivo antiplasmodial activity extracts of selected Kenyan medicinal plants. *Afr. J. Pharmacol. Ther.* **2015**, 4(4): 118-123.
23. Barasa Mustafa, Shaviya Nathan, Wamalwa Ronald, Mambo Fidelis, Okoth Patrick, Omedo Asaba Robin, Reuben Rutto, Kagasi Ambogo Esther, **Mutai Charles**, Sowayi Alubokho George, Ozwara Suba Hastings, Ng'ang'a Waithera Zipporah and Anjili Omukhango Christopher. Expression of Physiologic Biomolecules following Anti-Malarial Cytokine-CpG Motif Oligodeoxynucleotide Gene Therapy. *Merit Res. J. Med. Med. Sci.* **2015**, 3(9): 432-452.
24. Mukhwana E .S, Ngaira J.K, **Mutai C**. Strategies to Enhance Utilization of National Hospital Insurance Fund Scheme Medical Cover by Informal Sector Populations in Kakamega County, Kenya. *Universal Journal of Public Health*. **2015**, 3(5): 180 -186.
25. Mukhwana E .S, Ngaira J.K, **Mutai C**. Determinants of Uptake and Utilization of National Hospital Insurance Fund Medical Cover by People in the Informal Sector in Kakamega County, Kenya. *Universal Journal of Public Health*. **2015**, 3(4): 169-176.
26. C.N.Muthaura, J.M.Keriko, C.Mutai, A.Yenesew, J.W.Gathirwa, B.N.Irungu, R.Nyangacha, G. M.Mungai, S.Derese. Antiplasmodial potential of traditional antimalarial phytotherapy remedies used by the Kwale community of the Kenyan Coast. *Journal of Ethnopharmacology*. **2015**, 170:148–157.
27. Lucia Kipkoech Keter, Silas Kandie Cherogony, Richard Kipserem Korir, **Charles Mutai**. Factors contributing to drug resistant tuberculosis: A case study of tuberculosis patients

- attending Rift Valley Provincial General Hospital Nakuru, Kenya. *Science Research*. **2015**, 3(3): 45-52.
28. Nicholas Kimutai , Elizabeth W. Njenga , Pascaline Jeruto , Janet Kosgey , Jonah N. Kipkorir , **Charles Mutai** , Lillian Ng'eny and Richard Korir. Antimicrobial activity and cytotoxicity of selected medicinal plants found in Nandi County, Kenya. . *Afr. J. Pharmacol. Ther.* **2015**. 4(3): 86-91.
 29. Rose Inonda, Eliud Njage, Joseph Ngeranwa, and **Charles Mutai**. Determination of pesticide residues in locally consumed vegetables in Kenya. *Afr. J. Pharmacol. Ther.* **2015**, 4(1): 1-6.
 30. David Njenga, Beatrice Irungu, James Mbaria, **Charles Mutai**, Joseph Nguta .Antiplasmodial-Cytotoxic and Acute Toxicity Activities of *Vernonia lasiopus* O. Hoffman. *Afr. J. Pharmacol. Ther.* **2015**. 4(1): 16-20.
 31. Agasa Sarah Kwamboka, Joseph Gikunju, Charles Mbakaya, and **Charles Mutai** Factors influencing the occurrence of negative health effects associated with dry cleaning solvents. *Prime Journal of Social Science*, **2015**, 4(2): 967-971.
 32. Rosebella C. Rotich, Samwel Amwayi, **Charles Mutai**, and Simon Karanja. Organophosphate toxicity: prevalence and associated factors among farmers in Keiyo north sub-county, Kenya, 2013. *Prime Journal of Social Science*, **2015**,4(2), 978-986.
 33. Jackson K. Kirui, Raphael Ngure, Christine Bii, Peter N. Karimi, **Charles Mutai** and Beatrice K. Amugune. Combined Antibacterial and Antifungal Activities of *Eucalyptus citriodora* and *Syzygium aromaticum* Essential Oils. *Afr. J. Pharmacol. Ther.* **2014**, 3(1): 29-37.
 34. Obonyo E.O., **Mutai C.**, Kikuvu G., Marera D. Assessment of Pharmaceutical Waste Management Practices in Embakasi Division, Kenya: A case study in community Pharmacies. *Afr J Health Sci.* **2014**, 27(1):79-90.
 35. Kosgey Janet Cheruiyot, Njenga Elizabrtha, **Mutai Charles**, Bii Christine, Korir Richard, Too Emily. Antimicrobial activities and phytochemical profile of selected medicinal plants used among the Elgeyo community in Kenya. *International Journal of Medicinal Plants*, **2014**, 106: 373-384.
 36. Khaemba N.E, Mugo C.W, **Mutai C.** The Survival of Patients with Cancer of the Cervix in Nairobi, Kenya. *Afr J Health Sci.* **2013**, 24(1):12-15.
 37. Lilian C. Ngeny, Esther Magiri, **Charles Mutai**, Nicholas Mwikwabe, and Christine Bii. Antimicrobial properties and toxicity of *Hagenia abyssinica* (Bruce) J.F.Gmel, *Fuerstia Africana* T.C.E. Fries, *Asparagus racemosus* (Willd.) and *Ekebergia capensis* Sparrm. *Afr. J. Pharmacol. Ther.* **2013**, 2(3): 76-82.
 38. M.W. Njiru, **C. Mutai** and J. Gikunju. Awareness and practice on biomedical waste management among health care personnel in Kenyatta National Hospital. *East African Medical Journal.***2013**, 90 (8):277-283.
 39. Kosgey Janet Cheruiyot, Njenga Elizabeth, **Mutai Charles**, Bii Christine, Korir Richard, Too Emily. Ethnobotanical survey and plant monographs of medicinal plants used among the Elgeyo community in Kenya. *The Journal of Ethnobiology and Traditional Medicine*, **2013**, 120: 633-649.
 40. Mong'are samuel Ng'ang'a Zipporah, Maranga Rosebella, Osiemo Zipporah , Ngure Peter, Ngumbi Philip, **Mutai Charles**, Karanja Robert, Ireri Laban and Tonui Willy. Assessing the potential effects of selected Kenyan medicinal plants on longevity of *Phlebotomus duboscqi*

- (Diptera: Psychodidae). *Asian Journal of Pharmaceutical and Health Sciences* (AJPHS). **2013**, 3, 1, 648-653.
41. Bernard K. Langat, David K. Siele, Caroline Wainaina, Charles Mwandawiro, Joyce Ondicho, Willy K. Tonui, Chris Anjili, Laban N. Ileri, **Charles K. Mutai**. Larvicidal effect of *Mundulea sericea* (Leguminosaea) plant extract against *Aedes aegypti* (L.) (Diptera: Culicidae). *Afr. J. Pharmacol. Ther.* **2012**,1(3): 106-109
 42. **Charles Mutai**, Lucia Keter, Lilian Ngeny, Pascaline Jeruto. Effects of triterpenoids on Herpes Simplex Virus type1 (HSV-1) in vitro. *Med Aromat Plants.* 1:5, **2012**.
 43. Anuradha Kumar., Meng Zhang., Linyun Zhu, Reiling P. Liao, **Charles Mutai**, Shittu Hafsat, David R. Sherman, Ming-Wei Wang. High-throughput Screening and Sensitized Bacteria Identify an *M. tuberculosis* Dihydrofolate Reductase Inhibitor with Whole Cell Activity. *PLoS One*, **2012**; 7(6):e39961
 44. Korir K., **Mutai C.**, Nandako J. and Bii C. Antimicrobial Properties of *Hugonia castaneifolia* and Its Potential Use for the Control of Opportunistic Infections - *East Africa Medical Journal Vol,2012*, 88 No.4
 45. Langat K Bernard , Siele K David , Nanyingi O Mark , **Mutai K Charles** , Rukunga M Geoffrey , Mwandawiro Charles , Ileri Laban and Tonui K Willy. Larvicidal Action of Extracts from *Tithonia diversifolia* Against the Dengue Mosquito *Aedes aegypti* (Diptera: Culicidae). *Journal of Biologically Active Products from Nature*, **2012**, 2231-1874.
 46. Irene A. Ogutu, Baraza D. Lilechi, **Charles Mutai**, Christine Bii. Phytochemical analysis and antimicrobial activity of *Phytolacca dodecandra*, *Cucumis aculeatus* and *Erythrina excelsa*. *International Journal of Biological and Chemical Sciences*, **2012**, Vol 6, 2, 692-704.
 47. K. Korir, C. Bii, C. Kiiyukia, **C. Mutai**. Antimicrobial Activities of *Clutia abyssinica* and *Erythrina Abyssinica* Plants Extracts used among the Kipsigis Community of Bomet District in Kenya; *Journal of Natural product (Indian journal)*, **2012**, 7(5), 247-252.
 48. R.K. Korir, **C. Mutai**, C. Kiiyukia and C. Bii, 2012. Antimicrobial Activity and Safety of two Medicinal Plants traditionally used in Bomet District of Kenya. *Research Journal of Medicinal Plant*, **2012**, 6(5): 370-382.
 49. Jeruto Pascaline, **Mutai Charles**, Catherine Lukhoba and Ouma George. Phytochemical constituents of some medicinal plants used by the Nandis of South Nandi district, Kenya. *Journal of Animal and Plant Sciences*, **2011**, Vol9 (3): 1201 – 1210.
 50. Jeruto Pascaline, **Mutai Charles**, Ouma George and Catherine Lukhoba. An inventory of medicinal plants that the people of Nandi use to treat malaria. *Journal of Animal and Plant Sciences*, **2011**, Vol9 (3): 1192 – 1200.
 51. Bii C, Korir KR, Rugutt J. , **Mutai, C.** The potential use of *Prunus africana* for the control, treatment and management of common fungal and bacterial infections. *Journal of Medicinal Plants Research*, **2010**, Vol. 4(11), 995–998.
 52. Laban N. Ileri, Jedida Kongoro, Peter Ngunire, **Charles Mutai**, Bernard Langat, Willy Tonui, Albert Kimutai, Obadiah Mucheru. The potential of the extracts of *Tagetes minuta* Linnaeus (Asteraceae), *Acalypha fruticosa* Forssk (Euphorbiaceae) and *Tarchonanthus camphoratus* L. (Compositae) against *Phlebotomus duboscqi* Neveu Lemaire (Diptera: Psychodidae), the vector for *Leishmania major* Yakimoff and Schokhor. *Journal of Vector Borne Diseases*, **2010**, Vol. 47, 3, 168-174.
 53. Jeruto Pascaline, **Mutai Charles**, Ouma George, Catherine Lukhoba, Nyamaka Ruth L. and Manani Solomon D. Ethnobotanical survey and propagation of some endangered medicinal

- plants from south Nandi district of Kenya. *Journal of Animal and Plant Sciences*, **2010**, Vol8 (3): 1016 -1043.
54. Edward K. Githinji, Lucy W. Irungu, Willy K. Tonui, Geoffrey M. Rukunga, **Charles Mutai**, Charles N. Muthaura, Reuben Lugalia, Geoffrey Gikandi, Caroline W. Wainaina, Johnston M. Ingonga, Antony Wanjoya. In vitro effects of *Warburgia ugandensis*, *Psiadia punctulata* and *Chasmanthera dependens* on *Leishmania major* promastigotes. *Afr. J. Trad. Comp. Alt. Med*, **2010**, Vol. 7, 3,264-275.
 55. **Charles Mutai**, Christine Bii, Constantinos Vagias, Dennis Abatis, Vassilios Roussis. Antimicrobial activity of *Acacia mellifera* extracts and lupane triterpenes. *Journal of Ethnopharmacology*, **2009**,Vol 123, 1, 143-148.
 56. Lois M. Muiva, Abiy Yenesew, Solomon Derese, Matthias Heydenreich, Martin G. Peter, Hoseah M. Akala, Fredrick Eyase, Norman C. Waters, **Charles Mutai**, Joseph M. Keriko, Douglas Walsh. Antiplasmodial β -hydroxydihydrochalcone from seedpods of *Tephrosia elata*. *Phytochemistry Letters*, **2009**,2,99-102.
 57. Peter Kamau Ngiure, Willy Kiprotich Tonui, Johnstone Ingonga, **Charles Mutai**, Elizabeth Kigundu, Zipporah Ng'ang'a and Albert Kimutai. In vitro antileishmanial activity of extracts of *Warburgia ugandensis* (*Canellaceae*), a Kenyan medicinal plant. *Journal of Medicinal Plants Research*, **2009**, 3(2), 61-66.
 58. **C. Mutai**, C. Bii, G. Rukunga, J. Ondicho, P. Mwitari, D. Abatis, C. Vagias, V. Roussis. and J. Kirui. Antimicrobial activity of pentacyclic triterpenes isolated from *Acacia mellifera*. *Afr. J. Trad. Comp. Alt. Med*, **2009**, Vol 6, 1, 42-48.
 59. **C. Mutai**, C. Bii, J. Ondicho, G. Rukunga, P. Oketch. Antimicrobial screening of the root, stem bark and seed extracts of *Moringa oleifera* Lam. *East Africa journal of Botany*, **2008**, 2, 174-180.
 60. C. Bii, **C. Mutai**, J. Ondicho, G. Rukunga. Antimicrobial activity of some plants used in Kenya for management of infectious diseases. *East Africa journal of Botany*, **2008**, 2, 164-173.
 61. **CK Mutai**, FW Mburu, WK Tonui, MK Rono, C. Vagias, V. Roussis, GM Rukunga. *In vitro* anti-leishmanial effect of crude extracts and pure compounds from *Acacia mellifera*. *East Africa journal of Botany*, **2008**, 2, 143-155.
 62. Pascaline Jeruto, Catherine Lukhoba, Ouma G and **Charles Mutai**. Propagation of some endangered indigenous trees from the south Nandi district of Kenya using cheap, non-mist technology. *ARPN Journal of Agricultural and Biological Science*, **2008**, Vol. 3, no. 3, 1-6.
 63. Pascaline Jeruto, Catherine Lukhoba, George Ouma, Dennis Otieno and **Charles Mutai**. An ethnobotanical study of medicinal plants used by the Nandi people in Kenya, *Journal of Ethnopharmacology*, **2008**,Vol 116, 2, 370-376.
 64. Pascaline Jeruto, Catherine Lukhoba, George Ouma, Dennis Otieno, **Charles Mutai**. Herbal treatments in aldai and kaptumo divisions in Nandi district, Rift valley province, Kenya. *Afr. J. Trad. Comp. Alt. Med*, **2008**, Vol 5, 1,103-105.
 65. **Charles Mutai**, Geoffrey Rukunga, Constatinos Vagias and Vassilios Roussis. *In vivo* screening of antimalarial activity of *Acacia mellifera* (Benth) (Leguminosae) on *Plasmodium berghei* in mice. *Afr. J. Trad. Comp. Alt. Med*, **2008**, Vol 5, 1, 46-50.
 66. **Charles Mutai**, Constatinos Vagias, Vassilios Roussis. Triterpenes from *Acacia mellifera* (Vahl) Benth. *International Journal of Natural and Applied Science*, **2007**, 3, 2,179-182.

67. **Charles Mutai**, Dennis Abatis, Constantinos Vagias, Dimitri Moreau, Christos Roussakis and Vassilios Roussis. Lupane Triterpenoids from *Acacia mellifera* with Cytotoxic Activity. *Molecules*, **2007**, *12*, 1035-1044.
68. **Charles Mutai**, Dennis Abatis, Constantinos Vagias, Dimitri Moreau, Christos Roussakis and Vassilios Roussis. Two New Triterpenoids from *Acacia mellifera* (Vahl) Benth. (**2006**). Anapreca publication on natural products and drug discovery. Proceedings of the 11th NAPRECA Symposium August 9-12, 2005, Hôtel Panorama, Antananarivo, Madagascar.
69. **Charles Mutai**, Dennis Abatis, Constantinos Vagias, Dimitri Moreau, Christos Roussakis and Vassilios Roussis. Cytotoxic lupane-type triterpenoids from *Acacia mellifera*, *Phytochemistry*, **2004**, *65*, 1159-1164.