**CURRICULUM VITAE**

**MACHOCHO, ALEX KING’ORI (PhD)**

**Associate Professor; Organic / Natural Products Chemistry**

**Personal Information**

Date of Birth: **10th April, 1961**

Place of Birth: **Kihuyo, Nyeri County**

Home County / Town: **Laikipia / Nyahururu**

Nationality: **Kenyan (ID No. 5170136)**

Marital Status: **Married**

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**Kenyatta University**

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Qualifications

1. **PhD** **(Chemistry)** University of Barcelona, Natural Product Chemistry **(1996-2000)**
2. **MSc (Chemistry)** Kenyatta University, Natural Product Chemistry **(1990-1992)**
3. **BEd (Science)** University of Nairobi, Upper 2nd Class Honours **(1981-1985)**

Career

1. **Associate Professor** Kenyatta University, May 2014 - Present
2. **Senior Lecturer**: Kenyatta University, July 2003 – May 2014
3. **Lecturer**: Kenyatta University, Jan. 1996 – July 2003
4. **Tutorial Fellow**: Kenyatta University, July 1992 – Dec. 1995
5. **Graduate Assistant**: Kenyatta University, Jan. 1990 - June 1992
6. **College Tutor**: Laikipia Teachers College, Jan. 1989 - Jan. 1990
7. **Graduate Teacher**: Nyeri High School, July 1985 – Dec. 1988

**Merit Award**

* **Chancellor’s Extraordinary Doctoral Prize, University of Barcelona (2001)**. Natural Products Chemistry on PhD Programme on ‘Alkaloids from Kenyan Amaryllidaceae’ (Faculty of Pharmacy)

**Education/Research Background**

**June 2001 - Feb. 2002:** **Post-Doctoral Studies** **[UNESCO/Israel** **Post-Doctoral Fellowship]**

Ben-Gurion University of the Negev, Beer-Sheva, Israel;

**Research areas:** (1)Secondary Metabolites from *Embelia schimperi*

(2) Reactions of Quinones and Jeffamines

**August 1996 – July 2000:** **Doctoral Studies (PhD) [Spanish Government** **Scholarship]**

University of Barcelona, Spain

**Thesis**: Alkaloids from Kenyan Amaryllidaceae and Applications

**Jan. 1990 - July 1992: Master of Science (MSc) Studies (Chemistry)** (Coursework, Thesis and Examinations) **[Kenyatta University Scholarship]**

Kenyatta University, Nairobi, Kenya.

**Thesis:** Flavonoids from *Tephrosia emoroides* and their Antifeeding Effects on the Spotted Stalk Borer *Chilo partellus* Swinhoe (**Attached at ICIPE**)

**Sept. 1981 – June 1985:** **Bachelor of Education (BEd, Science) (Upper 2nd Class Honours) (Chemistry Major) [Kenya Government Scholarship]**

Kenyatta University College (By then under University of Nairobi)

Areas of Research

Natural Product Chemistry with particular reference to:

1. Search for bio-pesticides for the control of crop and animal pests as a strategy of improving food security
2. Search for antimalarial and antimicrobial agents from medicinal plants
3. Structural elucidation of Natural Products by use of spectroscopic methods
4. Synthesis of bioactive Natural Products

Teaching Responsibilities (Postgraduate and Undergraduate)

-Natural Product Chemistry -Organic Chemistry

-Medicinal Chemistry -Synthetic Organic Chemistry

-Stereochemistry -Organic Spectroscopy

-Polymer Chemistry -Applied Organic Chemistry

-Chemical Ecology

**Administrative Responsibilities at Kenyatta University/Department**

* University Intellectual Property Board Member
* Committee to Work on a Concept for the Processing of Branded Bottled Water by the University; April-July 2015 Member
* School of Pure and Applied Sciences (SPAS) - Board of Postgraduate Studies: Chairman 2007-2017
* Teaching Practice (T.P.) Area Supervisor-Thika B 2010-2015
* Committee to Ad Hoc on KU Copyrights June 2013 Member
* Committee to Spearhead Collaboration with Government Chemist, KEBS and KEPHIS
* Rapid Result Initiate (RRI) Graduate School (May 2011) Member
* Science/Technology Park (2008) Committee Member
* University Graduate School Board (Rep SPAS 2005-08) Member
* Departmental Academic Board Member
* Departmental Academic Advisor Year 1 Coordinator
* Departmental Social Welfare Committee Member
* Departmental Post-graduate Board (Chairman, 2003-2005) Member
* Linkages, student field trips and attachment committee (2003-Present) Member
* Departmental Income Generating Committee Member
* Research and proposal writing committee Member
* Departmental Time-Tabler (1994-1996)

**Others Responsibilities**

* **Trustee:** Kenyatta University Retirement Benefit Sept 2016-Present
* **External Examiner**: - Chemistry: University of Dar Es Salaam April 2013-Present
* **External Examiner**: - Organic Chemistry: University of Nairobi Jan 2013 -2015
* **External Examiner**: - Organic Chemistry: Egerton University 2010 - Present
* **External Examiner:** - Chemistry: Embu University College June 2013 - Present
* **External Examiner** – Natural Sciences: Mount Kenya University Sept 2011 –Present
* **Course Panelist:**  - Kenya Institute of Curriculum Development March 2014
* **Journal Papers Reviewer**: - Laikipia University Journal of Science and Technology [LUJST]

Sept 2012

* **External Examiner** – Chemistry: Kimathi University College of Technology 2008 – June 2013
* **Proposals Reviewer** – Jomo Kenyatta University of Agriculture and Technology – 2011 - Present
* **Chairman** - **Board of Governors**– Ngumo Sec. School, Laipikia West 2010 – Present
* **Patron** - Laikipia County Kenyatta University Students Association (LACKUSA) 1999 - Present

**Membership of Professional Associations**

* Kenya ChemicalSociety (KCS) – National Governing Council (Member, 2013 to present)
* Kenya ChemicalSociety (KCS) - Nairobi Chapter (Chairman, 2012 to present)
* Natural Products Research Network of East and Central Africa (NAPRECA)-Country (Vice Chairman) and Regional (Member)
* African Dryland Alliance for Pesticidal Plant Technologies (ADAPPT) - National Organizing Committee (Member)

**Research Grant Awards**

* **International Foundation of Science (IFS)**. **(PI; Dr. Muchugi A. of Biochemistry)**; US$ 20,000. (2012-2015).
* **Lake Victoria Research Initiative (VicRes) - SIDA/SAREC/IUCEA.** – **(PI**); Project title: Enhancing integrated pest and disease management strategies in the production of green gram in parts of Lake Victoria Basin. US$ 150,000. (2008 to 2012).
* **Lake Victoria Research Initiative (VicRes) - SIDA/SAREC/IUCEA.** – **(PI; Prof. Ndiege)**;Project title: Evaluation, biological and chemical studies of anti-malarial plants of Western Kenya. US $ 150,000. (2003 to 2007).
* **African Institute for Capacity Development (AICAD).** - **(PI)**;Project title: Bioprospecting for phytochemicals in ASAL regions in Kenya to control *Sitophylus zeamais* as a strategy for increasing food security. US $ 20,000. (2003 to 2005).
* **International Foundation of Science (IFS)** – **(PI)**;Project title: Active Principles from the Genus *Tephrosia* against various Insect Pests. US $ 20,000 (1995-1996).

**Postgraduate Supervision**

**Completed PhD**

1. **Muriuki, Salome Wamuyu;** **Potential of biogas technology to mitigate climate change and improve the livelihoods of small holder farmers in Kiambu County, Kenya. (2014).**
2. **Karau, Geoffrey Muriira;** Bioprospecting of anti-diabetic compounds from selected medicinal plants used among Mbeere and Meru. (2014).
3. **Omari Amuka;** “Efficacy of selected medicinal plants used by the Ogiek communities against microbial related conditions”. (2013).

**Completed MSc**

1. **Kihagi Regina Wamuyu;** Antimicrobial and phytochemical studies of *Lannea scheinfurthii* (Engl) Engl. (2016).
2. **Abuto John Otieno;** Evaluation of phytochemical profiles and antibacterial activity of *Warbugia* *ugandensis* extracts from Different populations east and west of Kenyan Rift Valley. (2016).
3. **Ong’era Tabitha N.;** Screening for Antimicrobial compounds present in *Bersama abyssinica* Fresen. (2016).
4. **Obel Jorum Humphrey;** Effects of Dichloromethane-Methanol leaf extracts of Carissa edulis (Forssk.) Vahl on Haematological and serum Lipid Profiles in Normal rat Models. (2016).
5. **Ombuna Naftal M.**;Isolation and identification of antimicrobials from *Erythrina excelsa* Bak. (2016).
6. **Gitonga Godfrey Mutuma**; Oral effects of Khat (*Catha edulis*) extract on Liver and kidney of albino Mice (2015)
7. **Mbithi, Justus Muema**; Phytochemical investigation of the antimicrobial activity of *Ochna* *thomasiana* Engl. & Gilg (2015).
8. **Sawenja, Fred W.; “**Isolation of antimalarial compounds from medicinal plants used in South Nyanza Regions”. (2013).
9. **Irungu, Kenneth (MSc).** “Antimicrobial activity and structural elucidation of secondary metabolites from *Rubus steudneri, Indigofera homblei* and *Chasmanthera dependens*”. (2012).
10. **Okwemba, Ronald Ing’ahu (MSc).** “Isolation and screening of metabolites for antimicrobial activity of selected plants of the family, Rutaceae Antimicrobial activity and structural elucidation of secondary metabolites from *Rubus steudneri, Indigofera homblei* and *Chasmanthera dependens*”. (2012).
11. **Omole, Ruth O. (MSc).** “Anti-malarial activity of *Cissampelos mucronata* and *Stephania abyssinica*.”(2011).
12. **Onyancha, Evans Marvin (MSc).** “Phytochemical studies of some species of genus *Teclea* and used in traditional medicines in Kenya”. (2010).
13. **Mohamed, Mbarak Awadh** **(MSc)**. “Phytochemical and biological studies of selected plants from the Ochnaceae family used in tradition medicine in the coastal region of Kenya”. (2010)
14. **Serem, Abraham Kipkemei (MSc).** “Antimicrobial activity and structural studies of secondary metabolites from *Tabernaemontana stapfiana* and *Garcinia buchananii*”. (2010).
15. **Muithya, James (MSc).** “Isolation, structure elucidation and antimicrobial activity studies of secondary metabolites from genus *Uvariodendron* *anisatum, Erythrococca bongensis* and *Echinops hispidus*”. (2010).
16. **Amboga, Enok Bichang’a (MSc**). “Anti-mycobacterial effects of selected medicinal plants used by herbal doctors in Kisii to treat respiratory infections”. (2009).
17. **Musyoka, Stephen Makari (MSc)** “Phytochemical investigation of anti-larval activity of the genus *Vitex* against *Anopheles gambiae*.” (2008).
18. **Njoroge, Peter Waithaka (MSc)**. “Isolation and structure elucidation bioactive antimicrobial agents from selected medicinal plants of the genus the *Rhus* (Anacardiaceae). (2008).
19. **Mwangi, Erastus Stanley Kamau (MSc, JKUAT).** “Pesticidal principals from *Teclea trichocarpa*, and *Albizia anthelmintica* against control the maize weevil (*Sitophylus zeamais*) as a strategy of food security” (2007).

**Continuing PhD**

1. **Njogu, Stephen Mwaniki;** Biological and phytochemical studies of selected medicinal plants from Eastern Kenya used in the management of diabetes mellitus. (Thesis writing)
2. **Kang’iri, Jacqueline;** Development of a Reference Material for Evaluation of Levels of Select Chemical Contaminants in Black Teas in the Kenyan Market. (Continuing)
3. **Githinji, Peter Muchoki;** Isolationand Structural Elucidation of Antimalarial Compounds from Selected Plants used Traditionally for Treatment of malaria in Kilifi County. (Continuing)

**Thesis Examination**

* Been involved in evaluation and examining of over **sixty (60)** MSc thesis and **twenty (20)** PhD thesis to date as an examiner internally (KU) and externally for Jomo Kenyatta University of Agriculture and Technology (JKUAT), University of Nairobi (UoN), Egerton University and Maseno University among other institutions.

**Utility Model**

1. Ndibo, E.M., Kariuki, P.N., **Machocho, A.K**. and Maingi, J.M. (2014). Antiseptic for Surfaces. Utility Model Number 57.

**Publications/Journal Articles**

1. Njogu, S.M., Arika, W.M., **Machocho, A.K**., Ngeranwa, J.J.N. and Njagi, E.N.M. (2018). *In Vitro* Hypoglycemic Effects of *Kigelia africana* (Lam); Studies with Alloxan-Induced Diabetic Mice. Journal of *Evidence-Based Integrative Medicine* 23: 1-10.
2. Abuto, J.O., Muchugi, A. and **Machocho, A.K.** (2018). Diversity in the Phytochemical Profiles of *Warbugia ugandensis* Sprague from Different Populations across the Kenya Rift Valley. *Journal of Pharmaceutical, Chemical and Biological Sciences* 6 (1): 41-51.
3. Ngolo, P., Nawiri, M., **Machocho, A.** and Oyieke, H. (2018). Pesticide Use in Pest Management: A case Study of Ewaso Narok Wetland Small-Scale Vegetable Farmers, Laikipia County, Kenya. *Journal of Agriculture and Ecology Research International* 14 (2): 1-8.
4. Okwemba, R.I., Tarus, P.K., **Machocho, A.K.**, Wanyonyi, A.W., Waweru, I.M., Onyancha, J.M., Onani, M.O. and Amuka, O. (2018). Isolation, Characterization and Biological activity of Organic extractives from *Calodendrum capense* (L.f) Thunb, (Rutaceae). *Journal of Medicinal Plants Research* 12 (13): 139-163.
5. Abuto, J.O., Muchugi, A., Mburu, D., Machocho, A.K. and Karau, G.M. (2016). Variation in Antimicrobial Activity of *Warbugia ugandensis* Extracts from Different Populations across the Kenyan Rift Valley. *Journal of Microbiology Research* 6 (3): 55-64.
6. Njogu, S.M., Arika, W.M., Nyamai, D.W., Ngugi, P.M., **Machocho, A.K.**, Ngeranwa, J.J.N. and Njagi, E.N.M. (2016). Hypoglycemic Effects of Aqueous and Ethyl acetate Leaf Extracts of *Maytenus* *putterkloides* in Alloxan Induced Diabetic Mice. *Journal of Diabetes and Metabolism* 7 (6): 1-7 (1000686).
7. Obel, H.J., **Machocho, A.K.** and Ngugi, M.P. (2016). Effects of Dichloromethane-Methanolic Leaf Extracts of *Carissa edulis* (Forssk.) Vahl on Serum Lipid Profiles in Normal Rat Models. *Journal of Hypertension 5* (2): 1-6 (1000217).
8. Mbithi, J.M., Awadh, M.M., Gikonyo, N.K., Tarus, P.K. and **Machocho, A.K.** (2016). Phytochemical and Antibacterial Investigation of the Plant *Ochna thomasiana* Engl. & Gilg. *Journal Kenya Chemical Society* 9 (1): 82-90.
9. Obel, H.J., Ngugi, M.P. and **Machocho, A.K.** (2016). Haematological Effects of Dichloromethane-Methanolic Leaf Extracts of *Carissa edulis* (Forssk.) Vahl in Normal Rat Models. *Journal of Hematology & Thromboembolic Diseases* 4 (1): 1-8 (1000232).
10. Gitonga, G.M., Joseph Ngeranwa, J., **Machocho, A.K.,** Mgutu, A. Gitonga, A.W. and Muhihu, T. (2015). A preliminary study on the effects of Khat (*Catha edulis*) on liver of mice. *The Journal of Phytopharmacology* 4(3): 176-182.
11. Amuka, O., **Machocho, A.K.,** Okemo, P.O. and Mbugua, P.K. (2015). Antifungal and Antibacterial Activity of Crude Stem Bark Extracts of *Bersama abysinicca* Verdc. and *Faurea saligna* Harr. *Research Journal of Medicinal Plant* 9 (4): 160-169.
12. Amuka, O., **Machocho, A.K.,** Okemo, P.O. and Mbugua, P.K. (2015). Preliminary Medicinal Value Evaluation of Some Plants Used by the Ogiek in Management of Microbial Related Infections. *European Journal of Medicinal Plants* 9 (4): 1-12.
13. Karau, G.M., Njagi, E.N.M., **Machocho, A.K**., Wangai, L.N. and Mungiria, J.N. (2015). Chemical Composition and *in vitro* activity of *Ocimum americanum*. *Advances in Analytical Chemistry* 5 (2): 42-49.
14. Awadh, M.M., Tarus, P.K., Onani, M.O., **Machocho, A.K**. and Hassanali, A. (2014). Biflavonoids fron an Ethno-Medicinal Plant *Ochna holtzii* Gilg. *Natural Products Chemistry & Research* 2 (6): 1-5.
15. Amuka, O., Okemo, P.O., **Machocho, A.K.** and Mbugua, P.K. (2014). Ethnobotanical Survey of Selected Medicinal Plants Used by Ogiek Communities in Kenya against Microbial Infections. *Ethnobotany Research and Application Journal* 12: 627-641.
16. Omole, R.A., Gathirwa, J., Akala, H., Malebo, H.M., **Machocho, A.K.**, Hassanali, A. and Ndiege, I.O. (2014). Bisbenzylisoquinoline and hasubanane alkaloids from *Stephania abyssinica* (Dillon & A. Rich) (Menispermeceae). *Phytochemistry* 103:123–128.
17. Rugutt, J.K., Okoth, K.O., Wanjau, R.N., Gikonyo, N.K**., Machocho, A.K.,** Rugutt, K.J., Obel, M.C. and Mibei, E. (2014). A Quantitative Analytical Chemistry Research-based Experiment Involving Comparative Analysis of *Amaranth* Grain Oils Extracted from Embu and Meru Districts in Kenya. *The Chemical Educator* 19: 91–95.
18. Rugutt, J.K., Okoth, K.O., Wanjau, R.N., Gikonyo, N.K**., Machocho, A.K.,** Rugutt, K.J., Rykhlya, K.Y., Harris, K.B., Wilson, K.R. and Koech, J. (2014). US-Africa Collaboration in a Chemical Education Project Involving Analysis of Amaranthus Grain Oil from Selected Agro-Ecological Zones in Kenya. *The* *Chemical Educator* 19: 50–54.
19. Amuka, O., **Machocho, A.K.**, Okemo, P.O. and Mbugua, P.K. (2014). Profiling of Antimicrobial Properties of *Rubus keniensis* Standl. Crude Methanol Root Bark Extract Against Selected Human Pathogenic Bacteria. *Journal of Pharmacognosy and Phytochemistry* 2(5): 20-23.
20. Karau, G.M., Njagi, E.N.M., **Machocho, A.K**., Wangai, L.N. and Kamau, P.N. (2014). Efficacy and Safety Assessment of *Launaea cornuta* Extracts in the Management of Diabetes Mellitus. *American Journal of Medicine and Medical Sciences* 4(1): 1-7.
21. Amuka, O., Okemo, P.O., **Machocho, A.**, Mbugua, P., Njagi, E.N.M. (2013). Part 1: The Role of Phytomedicine in the Challenges of Emerging, Re-Emerging Diseases and pathogens Resistance to Antibiotics. *International Journal of Herbal Medicine* 1 (4): 77-84.
22. Amuka, O., Okemo, P.O., **Machocho, A.**, Mbugua, P., Njagi, E.N.M. and Nyamache, A. (2013). Part 3: Intercession of Phytomedicine in the Challenges of Emerging, Re-Emerging Diseases and pathogens Resistance to Antibiotics. *International Journal of Herbal Medicine* 1 (4): 101-105.
23. Amuka, O., Okemo, P.O., **Machocho, A.**, Mbugua, P., Njagi, E.N.M. and Nyamache, A. (2013). Part 2: The Role of Phytomedicine in the Challenges of Emerging, Re-Emerging Diseases and pathogens Resistance to Antibiotics. *International Journal of Herbal Medicine* 1 (4): 92-100.
24. Malebo, H.M., Welzler, T., Cal, M., Swaleh, S.M., Hassanali, A., **Machocho, A.K**., Sequin, U., Haussinger, D., Dalsgaard, P., Omolo, M.O., Hamburger, M., Brun, R. and Ndiege, I.O. (2013). Anti-Protozoal and Structure-activity Relationships of Chemical Constituents of *Acricarpus* *Chloropterus* Oliver (Malpighiaceae) from Tanzania. *International Journal of Natural Products Research* 3 (4): 74-81.
25. Karau, G.M., Njagi, E.N.M., **Machocho, A.K**., Wangai, L.N., Kamau, P.N. and Karau, P.B. (2013). Hypoglycemic Activity of Aqueous and Ethyl Acetate Extracts of *Senna spectabilis* in Alloxan-Induced Diabetic Male Mice. *Journal of Pharmaceutical and Biomedical Sciences* 31 (31): 1089-1095.
26. Karau, G.M., Njagi, E.N.M., **Machocho, A.K**., Wangai, L.N. and Kamau, P.N. (2013). Phytonutrients, Minerals and *in vitro* Antioxidant Capacity of Leaf and Stem Bark Powders of *Senna spectabilis*. *Journal of Pharmacognosy and Phytochemistry* 2 (2): 51-59.
27. Mwangi, S.K.E., Keriko, M.J., Tarus, K.P., **Machocho, K.A**., Chhabra, C.S. and Wanyonyi, A. (2012). Activity of Extractives from *Albizia anthelmintica* Brongu. and *Teclea trichocarpa* Engl. as Biorational alternatives to Control the Maize Weevil (*Sitophilus zeamais*). *East African Journal of Pure and* *Applied Science* 4 (1): 113-120.
28. Karau, G.M., Njagi, E.N.M., **Machocho, A.K**., Wangai, L.N. and Kamau, P.N. (2012). Hypoglycemic Activity of Aqueous and Ethyl Acetate Leaf and Stem Bark Extracts of *Pappea capensis* in Alloxan-Induced Diabetic BALB/c Mice. *British Journal of Pharmacology and Toxicology* 3 (5): 251-258.
29. Karau, G.M., Njagi, E.N.M., **Machocho, A.K.** and Wangai, L.N. (2012). Phytonutrient, Mineral Composition and *In vitro* Antioxidant Activity of Leaf and Stem Bark Powders of *Pappea capensis* (L.). *Pakistan Journal of Nutrition* 11 (2): 123-132.
30. **Machocho, A.K.**, Rugumamu, C.P., Birgen, J.K., Amuka, O. and Asiimwe, E. (2012). The Status of Green Gram Production, Pest and Disease Management in Parts of Lake Victoria Basin. Ethnobotany and Health Cluster Proceedings. VicRes. pp. 81-90.
31. Mwangi, E.S.K., Keriko, J.M., **Machocho, A.K.,** Wanyonyi, A.W., Malebo, H.M., Chhabra, S.C. and Tarus, P.K. (2010). Antiprotozoal Activity and Cytotoxicity of metabolites from leaves of *Teclea* *trichocarpa*. *Journal of Medicinal Plants Research* 4 (9): 726-731.
32. Ruttoh, E.K., Bii, C.C., Tarus, P.K., **Machocho, A.K**., Karimi, L.K. and Okemo, P.O. (2009). Antifangal Activity of *Tabernaemontana stapfiana* Britten (Apocynaceae) Organic Extracts. *Pharmacognosy Research* 1 (6): 387-391.
33. Ruttoh, E.K., Tarus, P.K., Bii, C.C., **Machocho, A.K**., Karimi, L.K. and Okemo, P.O. (2009). Antibacterial Activity of *Tabernaemontana stapfiana* Britten (Apocynaceae) Extracts. *African Journal of Traditional and CAM* 6 (2): 186-194.
34. Kirira, P.G., Rukunga, G.M., Wanyonyi, A.W., Muthaura, C.N., Geoffrey M. Mungai, G.M., **Machocho, A.K.** and Isaiah O. Ndiege, I.O. (2007). Tigliane Diterpenoids from the Stem Bark of *Neoboutonia macrocalyx*, *Journal of. Natural Products* **70** (5), 842-845.
35. **Machocho, A.K.**, Chhabra, S.C., Codina, C., Viladomat, F. and Bastida, J. (2005). Amaryllidaceae Alkaloids from *Crinum kirkii* Baker. Proceedings, Kenya Chemical Society International Conference; Kenyatta University, August, 2005).
36. Mwangi, E.K., **Machocho, A.K**., Tarus,P.K., Keriko, J.M., Chhabra, S.C., Wanyonyi. A.W.and Malebo, H.M. (2005). Phytochemical and Biological Studies of *Teclea trichocarpa* and *Albizia anthelmintica*. Proceedings, Kenya Chemical Society International Conference; Kenyatta University, August 2005)
37. **Machocho, A.K.**, Bastida, J., Codina, C., Viladomat, F., Brun, R. and Chhabra, S.C. (2004). Augustamine type alkaloids from *Crinum kirkii*, *Phytochemistry* **65** (23), 3143-3149.
38. **Machocho, A.K**., Win, T., Grinberg, S. and Bittner, S. (2003). Reactions of benzoquinones and naphthaquinones with 1,8-diamino-3,6-dioxanonane and with 1,11-diamino-3,6,9-trioxaundecane. *Tetrahedron Letters* **44** (29), 5531-5534.
39. **Machocho, A.K.**, Kiprono, P.C., Grinberg, S. and Bittner, S. (2003). Pentacyclic triterpenoids from *Embelia schimperi*. *Phytochemistry* **62** (4), 573-577.
40. Tarus, P.K., **Machocho, A.K**., Lang’at, C.C. and Chhabra, S.C. (2002). Flavonoids from *Tephrosia aequilata*, *Phytochemistry*, **60**, 375-379.
41. Labranya, J., **Machocho, A.K.**, Kricsfalusy, V., Brun, R., Codina, C., Viladomat, F., Bastida, J. (2002). Alkaloids from *Narcissus angustifolius* subsp. *transcarpathicus* (Amaryllidaceae). *Phytochemistry* **60**, 847-852.
42. Herrera, M.R., **Machocho, A.K.**, Nair, J.J., Campbell, W.E., Brun, R., Viladomat, F., Codina, C. and Bastida, J. (2001). Alkaloids from *Cyrtanthus elatus*, *Fitoterapia* **72**, 444-448.
43. Herrera, M.R., **Machocho, A.K.**, Brun, R., Viladomat, F., Codina, C. and Bastida, J. (2001). Alkaloids from *Zephyranthes citrina* Baker, *Planta Medica* **67**, 191-193.
44. Nair, J.J., **Machocho, A.K.**, Campbell, W.E., Brun, R., Viladomat, F., Codina, C. and Bastida, J. (2000). Alkaloids from *Crinum macowanii*, *Phytochemistry* **54**, 945-950.
45. **Machocho, A.**, Chhabra, S.C., Viladomat, F., Codina, C. and Bastida, J. (1999) Alkaloids from *Ammocharis tinneana*, *Phytochemistry*, **51** 1185-1191.
46. **Machocho, A.**, Chhabra, S.C., Viladomat, F., Codina, C. and Bastida, J. (1998). Alkaloids from *Crinum stuhlmannii*, *Planta Medica*, **64** 679-680.
47. **Machocho, A.K.,** Lwande, W., Jondiko, J.O., Moreka, L.V.C. and Hassanali, A. (1995). Three new flavonoids from the roots of *Tephrosia emoroides* and their antifeeding activity against the Larvae of the Spotted Stalk Borer *Chilo partellus* Swinhoe; *International Journal of Pharmacognosy* **33** (3), 222-227.

**Conferences/Seminars/Workshops (Presentations and Participation) (Last 10 Years)**

1. Regional Workshop on Use of Utility Models and Industrial Designs for SMes in ARIPO Member States; Harare 24-26 June 2015
2. Kenya Chemical Society International Conference; UoN; 5-8 May 2015
3. Sadia National Laboratories USA: Advanced Chemical Safety and Security Workshop. UoN; 28-30 April 2015
4. NAPRECA Kenya Chapter Workshop JKUAT. 22nd Nov 2013
5. Kenya Chemical Society Workshop, Nairobi Chapter. Multi Media. 31st August 2013
6. Kenya Chemical Society Workshop, Nairobi Chapter. TUK. 27th April 2013
7. The First International Conference on Pesicidal Plants, ICIPE. 21-24 January 2013
8. Kenya Chemical Society International Conference, Maseno University. 15th to 18th October 2012
9. Kenya Chemical Society Workshop, Nairobi Chapter. JKUAT. 25th August 2012
10. Pan-African Natural Products Library Consortium Meeting. Africa Academy of Science, Nairobi. 26th to 27th July 2012. “Natural Products Research at Kenyatta University”
11. The inaugural Conference on NanoTechnology and material Science in Kenya. Kenyatta University. 18th to 20th July 2012. (Organizer and Session Chairing).
12. Lake Victoria Research initiative (VicRes) Biennial Forum. Speke Resort Munyonyo Kampala 9th-13th October 2011. The Status of Green Gram Production, Pest and Disease Management in Parts of Lake Victoria Basin.
13. The 14th NAPRECA Symposium. ICIPE Nairobi. 8th – 12th August 2011. Antimicrobial Activity and Phytochemical Studies of Some Selected Medicinal Kenyan Plants.

14. International Nanomedicine Workshop on Infectious Diseases of Poverty: Perspectives and Possibilities. Magaliesberg South Africa. 27th to 31st March 2011.

15. Formulation of Bioprospecting Strategy Framework for Protected Areas for KWS, Whitesands Hotel. Mombasa 27th Feb to 3rd March 2011

16. Regional Consultative Workshop on “Enhancing the Conservation and Use of Neglected and Underutilized Species of Crops in Eastern & Southern Africa”. Kenyatta University Conference Centre. 26th -28th July 2010.

17. Capacity Building Working on Interpretation and Domestication of the Universal Declaration on Bioethics and Human Rights. KNATCOM-UNESCO. Multimedia University College 25th to 28th May 2010.

18. Bioprospecting Experts Workshop for KWS. Voi Safari Lodge Tsavo Park 20th -25th June 2010.

19. Intellectual Property Workshop for Researchers in Nairobi Region by KIPI. Lukenya Getaway Hotel: 24th -27th February 2010.

20. Pan-African Green Chemistry Workshop. Cape Town, South Africa on 24th -26th Jan 2007.

21. Lake Victoria Research Initiative (VICRES) - SIDA/SAREC/IUCEA**.** Various workshops and seminars within the regions 2004-2012

22. Amaryllidaceae alkaloids from *Crinum kirkii* Kenya Chemical Society Conference, August 2005, Kenyatta University, Nairobi.

23. Phytochemical and Biological Studies of *Teclea trichocarpa* and *Albizia anthelmintica*. Proceedings, Kenya Chemical Society International Conference; Kenyatta University, August 2005)

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