



Name of Faculty/Staff: Prof Moses K Rotich

Designation/Rank: Associate Professor, Chemistry Department and Current Director DPPC

Laikipia University: School of Science and Applied Technology

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EDUCATION BACKGROUND

2004 – 2005: University of KwaZulu – Natal, Durban, RSA. Post-Doctoral studies

Title: Photochemistry of sunscreen–active compounds – Stabilized by use of layered Double Hydroxides by intercalation process.

1999 – 2003: Rhodes University, Grahamstown, RSA Award: Doctor of Philosophy in Chemistry

Title: Thermal studies on some aminobenzoic acids derivatives (PhD Thesis)

1989-1992: University of Malawi, Zomba. Award: Master of Science in Applied and Industrial

Chemistry Title: A study on the production of edible oils from teaseed kernel (C.

sinensis).

1986-1989 University of Nairobi, Kenya. Award: Bachelor of Science (2nd class Upper Division)

majors in Chemistry, minor in Geology Title: Determination of selected heavy metals

in manufactured tea collected from some KTDA factories in Kenya (done in

collaboration with Tea Research Foundation-Kenya).

PREVIOUS POSTS

2013-2014 Senior Lecturer, Chemistry Department, Laikipia University, Ag. Dean, School of

Science and Applied Technology and Director, Planning and Performance Contracting

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2007-2011 Dean, Faculty of Science Egerton University

2003-2012 Senior Lecturer, Egerton University, Chemistry Department

2002-2003 Lecturer, Egerton University, Chemistry Department

1994-2002 Assistant Lecturer, Egerton University, Chemistry Department

PUBLICATIONS

1. Kerio L.C, Bend J.R, Wachira F.N. Wanyoko J.K and Rotich M.K (2011), Attenuation of t-Butylhydroperoxide induced oxidative stress in HEK 293 WT cells by tea catechins and anthocyanins, *Journal of Toxicology and Environmental Health Sciences*, Vol.3 (2011) 367-375.
2. L.C.Kerio, F.N. Wachira, J.K. Wanyoko and M.K.Rotich (2012), Characterization of anthocyanins in Kenyan teas: Extraction and identification, *Food Chemistry*, 131 (2012) 31-38.
- 2006 C.K Chepkwony, C.B.O Kowenje, P.O Ongoma, C.M Nguta and R.K Ngeno
3. Moses K. Langat, Peter K. Cheplogoi, Deng L. Arop, Kepha S. Sum, Rotich K. Moses and Anne C.G. Michura, Flindersimine a Furoquinoline Alkaloid from *vepris uguenensis* (Rutaceae) as a synergist to Pyrethrins for the control of Housefly, *Musca Domestica* L. (Diptera: Muscidae), *Journal of Kenya Chemical Society*, Vol.6 (2011) 9-16
4. Ngeno, RK, Chepkwony CK, Nguta CK, and Rotich MK (2008), Effects of combination of Minjingu phosphate rock and single superphosphate fertilizer on dissolution of Minjingu rock phosphate in soils, *Egerton Journal of Science and Technology*, Vol 8 (2008) 170- 185
- 2008 C K Chepkwony, PS Williamson, R K Ngeno, P O Ongoma and C M Nguta. "Effects of combinations of rock phosphate on extractable phosphate concentrations in soil." *Journal of the Kenya Chemical Society* vol.2 (2),2005
5. 2008 Ngeno, K K, Chepkwony C K, Nguta C M and Rotich M K 'Effects of Combination of Minjingu Phosphate rock and single Superphosphate Fertilizer on Dissolution of Minjingu

Phosphate Rock in Soils". Egerton J. Science Technology 2008, 8. 170-185, 2008

6. S. Agatonovic-Kustrin, B.D. Glass and M.E. Brown, Rotich, M.K (2004). Modelling the thermal behaviour of carboxylic acid derivatives with cyclodextrin in solid-state, *Journal of Thermal Analysis and Calorimetry*, 77 (2004) 391-402
7. Rotich, M.K. B.D. Glass and M.E. Brown, Thermal studies on mixture of aminosalicic acids with cyclodextrins, *Journal of Thermal Analysis and Calorimetry*, 73 (2003) 671-686.
8. Rotich, M.K. B.D Glass and M.E. Brown, Thermal studies on mixture of benzoic and salicylic acids with cyclodextrins, *Journal of Thermal Analysis and Calorimetry*, 73 (2003) 671-686.
9. Rotich, M.K., B.D Glass and M.E. Brown, Thermal studies on mixture of aminosalicic acids with cyclodextrins, *Journal of Thermal Analysis and Calorimetry*, 73 (2003) 687-706.
10. Rotich, M.K, B.D. Glass and M.E. Brown, Thermal studies on some substituted aminobenzoic acids, *Journal of Thermal Analysis and Calorimetry*, 64 (2001) 681-688.

CONFERENCE AND PROCEEDINGS

1. Rotich, M.K., B.D. Glass, B.D and Brown, M.E, "Thermal studies on some substituted aminobenzoic acids" 12th International Congress on Thermal Analysis and Calorimetry, Copenhagen, Denmark, August 2000.
2. Rotich, M.K., B.D. Glass and M.E. Brown, „Thermal studies on some substituted aminobenzoic acids" 35th Convention of the South African Chemical Institute, Potchefstroom University, September 2000.
3. Rotich, M. K., B.D. Glass and M.E. Brown, „Thermal studies on aminosalicic acids"9th Southern African Symposium on Thermal Analysis, Pretoria, October 2001.
4. Rotich, M.K., Glass and M.E Brown, „Thermal studies on mixture of aminosalicic acids" 36th Convention of the South African Chemical Institute (SACI), Port Elizabeth, July 2002.

5. Rotich, M.K., "Stability studies on some substituted aminobenzoic acids derivatives" The 35th conference of Kenya Chemical Society, Egerton, Njoro, September 2002.
6. Rotich, M.K. and Bice S. Martincigh, "Incorporation of sunscreen-active agents in the nanospaces of Layered Double Hydroxides". The 11th Congress of the European Society for Photobiology, September 2005, Aix-les-Bains, France.
7. Natural Products Research Network for Eastern and Central Africa (NAPRECA) Drugs Discovery from Africa Flora 12th NAPRECA symposium 22-26th July 2007, Hotel Africana, Kampala Uganda.
8. Conference of Vice Chancellors, Deans of Science and Engineering and Technology (COVDSET) 22-25th November 2009, Munyonyo Resort, Kampala Uganda.

RESEARCH PROJECTS

1. Determination of selected heavy metals in manufactured tea collected from some KTDA factories in Kenya (Final year undergraduate project and done in collaboration with Tea Research Foundation-Kenya).
2. A study on the production of edible oils from teaseed kernel (*C. sinensis*) (M.Sc thesis).
3. Thermal studies on some aminobenzoic acids derivatives (PhD thesis).
4. Photochemistry of sunscreen-active compounds – Stabilized by use of layered Double Hydroxides (Post-Doctoral studies) by intercalation process.

STUDENTS SUPERVISED

1. Lilian Kerio (With Prof Wachira and J.K Wanyoko) Title: Extraction and Characterization of active agents in Kenyan Teas (Graduated 2009)

2. Samuel Omboga (With Prof Mavura) Title: Conductivity of Saline water of lakes and salt pans in Botswana (2010).
3. Currently: supervising Mr Cheruiyot MSc Student Chemistry department (with Dr. Elizabeth Mwangi) Title: Skin care rocks; Chemistry and their effects

PROFESSIONAL MEMBERSHIP

1. Member of South Africa Chemical Institute (SACI 6125)
2. Member of Kenya Chemical Society (KCS)
3. Kenya DAAD Scholars Association – KDSA (Assistant Secretary–Egerton Chapter).
4. Member Professional Trainers Association of Kenya (PTaK) Member number 157.

TRAINING

1. Leadership and Governance training at Kenya School of Monetary studies for Egerton University Senate members, June 27-29, 2007.
2. Rapid Results Initiative Training at Agricultural Resource Centre (ARC), Egerton, Njoro, May 15, 2007.
3. Biorisk Assessment Training organized by Africa Biological Safety Association (AfBSA) sponsored by Biosecurity Engagement Programme (BEP), 3-8th March 2010 (KEMRI HQs).
4. Performance Contracting design, reporting format and evaluation, Results Based Management (RBM) strategy, Annual Work Plan Development (AWP) organized for State corporation by Performance Contracting Department (PCD) office of the Prime Minister, 12-17th October 2009

5. Training on corporate governance for the development of state corporations attended as a Kisii University College council member, at KIA Hqs, Lower Kabete, and 19-20th October 2010.
6. Performance Management System (PMS) and E-ProMIS training at KICD HQ Nairobi facilitate by Ministry of Education, Science and Technology (MoEST) and the treasury from 28th April- 2nd May 2014.
7. Participated on National Mutiplication Training on Curriculum Development/ Review for newly Chartered Public Universities in Kenya, held in Nakuru, Midland Hotel facilitated by CUE, DAAD, DIES and HRK 4-6th June 2014

AWARDS RECEIVED

1. Government of Kenya Scholarship for studies at University of Nairobi, Kenya (1986-1989)
2. DAAD scholarship to study Masters degree at University of Malawi. (1989-1992)
3. National Research Foundation (NRF) research funding for Ph.D studies at Rhodes University, RSA. (1999-2002)[Partial Funding]
4. NRF research funding for Post-Doctoral studies at University of KwaZulu-Natal Durban, RSA.(2004-2005)

INSTRUMENTATIONS

1. Thermal Analysis Instruments, Differential Scanning Calorimetry (DSC), Thermogravimetric Analyzer(TGA), Evolved Gas Analyzer (EGA), Hot-stage

microscopy (HSM)

2. Non-thermal instruments High Performance Liquid Chromatography (HPLC), UV-Vis,
IR, XRD and Computer Modeling