

## CURRICULUM VITAE



### PERSONAL INFORMATION

Name: WAFULA Alphonse Wanyonyi / MALANGA Alphonse Wanyonyi  
Current employer.: Kenyatta University  
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### QUALIFICATIONS

- Ph.D (1996-2001) Kenyatta University, Natural Product Chemistry
- MSc (1989-1993) Kenyatta University, Chemistry
- B.Ed (1984-1987) Kenyatta University, 1<sup>st</sup> Class Honours in Chemistry and Physics (Chemistry Major)  
Title of the thesis: Phytochemical and molluscicidal studies on Kenyan *Solanum* species.

### CAREER

- Senior lecturer (Kenyatta University) July 2003 - present
- Lecturer (Kenyatta University) January 1996- July 2003
- Tutorial Fellow (Kenyatta University) 1993-1996
- Graduate Assistant (Kenyatta University) 1991-1993
- Graduate Teacher (Bokoli High School, Bungoma), 1987-1988
- Untrained Teacher (Sikusi High School, Bungoma) 1982- 1983

### AREAS OF INTEREST

Natural product chemistry and organic chemistry with particular reference to:

- Isolation and structure elucidation of secondary metabolites from medicinal plants used by indigenous people of Kenya
- Search for molluscicidal and antimalarials from plants in the endemic areas

- search for biopesticides for control of crop pests as a strategy of improving food security
- Carrying the synthesis of bioactive natural products

## TEACHING DUTIES AND INTERESTS [Undergraduate and post graduate levels]

- Natural Product chemistry
  - Organic chemistry
  - Chemistry of aromatic compounds
  - Organic synthesis
  - Carbohydrate and Protein chemistry
  - Medicinal chemistry
  - Organic spectroscopy
  - Heterocyclic chemistry
  - Stereochemistry and conformation analysis
  - Environmental chemistry
  - Industrial chemistry
  - Quality assurance related subjects
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## EDUCATION/RESEARCH BACKGROUND

- **1996-2000 Doctor of Philosophy (Ph.D)**  
Kenyatta University, Field of Study: Natural Product Chemistry- Research and thesis  
**Title of the thesis:** Phytochemical and molluscicidal studies on Kenyan *Solanum* species.
- **1989-1993 Master of Science (MSc.)**  
Kenyatta University, Field of study: Chemistry - Course work, examination and thesis  
**Title of the thesis:** Phytochemical, molluscicidal and larvicidal investigation on the flower head extracts of *Spilanthes mauritania*
- **1984-1987 Bachelor of Education (B.Ed.):** First Class Honours  
Kenyatta University, Field of Study: Education, Chemistry (Major) and Physics (Minor).

1981-1982 Kenya Advanced Certificate of Education, "A" Level.

- 1983 Pre-university, National Youth Service (4months)
  - 1977-1980 Kenya Certificate of Education, "O" level.
  - 1976 Certificate of Primary Education
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## EMPLOYMENT HISTORY

July 2003- present

Kenyatta University -Senior lecturer

- Teaching undergraduate and postgraduate students

- Supervision of the undergraduate practicals and research projects
- Supervision of the postgraduate research projects
- Examination of postgraduate theses
- Practicum to teachers in the field and those on industrial attachment

January 1996-July 2003

Kenyatta University - lecturer

1993- 1996

Kenyatta University

Tutorial fellow

1991- 1993

Kenyatta University

Graduate Assistant

1987- 1988

Teachers Service Commission

Graduate Teacher

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## ADMINISTRATIVE RESPONSIBILITIES IN THE DEPARTMENT

### Departmental

- Manual Committee: Chairman 1999 to December 2002
- Examination Coordination committee: member 1999 - 2004
- Research and proposal writing committee: Chairman 2003
- Linkages, student field trips and attachment committee: chairman
- Examination moderation committee: member
- Academic Advisor Year 2 1999 to present
- Seminar committee: Member
- Chairman field trip and industrial linkages
- Member of Board of undergraduate studies
- Examination coordinator 2004 to present
- Warden Ruiru 2007 to present

## COMMUNITY RESPONSIBILITY

- Member of the board of Governors- St anthony's Sec, Sirisia 1996- 2004
  - Member of the board of Governors- Friends Bisunu Sec. 2005- present
  - Chairman board of Governors- St anthony's Sec, Sirisia 2005- present
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## MEMBERSHIP TO PROFESSIONAL ASSOCIATION

- Kenya Chemical Society
  - Natural Products Research Network of East and Central Africa (NAPRECA)
  - Kenya DAAD Scholars' Association
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## GRANT AWARDS

- Scholarship from Kenyan government to study M.Sc (Chemistry at Kenyatta University) (1989-1991)
- Deans Committee Award for the study of Ph.D 1996
- German Academic Exchange Services (DAAD) scholarship for PhD research work (1997-2001).
- DAAD scholarship for a six month study visit to the Technical University of Braunschweig, Braunschweig, Germany to continue with the PhD research work (1998)

## PARTICIPATION IN PROGRAMMES IN THE DEPARTMENT ETC

- Examination of thesis for Chemistry masters students
  - Assessment of the masters proposals for the school of pure and applied Science
  - Development of the Industrial chemistry Option syllabus
  - Review of the organic chemistry Syllabus for both at undergraduate and master levels
  - Moderation of departmental Examinations
  - Teaching practice and industrial attachment supervision
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## SUPERVISION

Peter Kirira Gakio MSc, Graduated

Title: Biomedical Investigation on Traditional Antimalarials From Kilifi District, Kenya

Njoroge Waithaka MSc, Graduated 2008

Title: Isolation and structure elucidation of Bioactive antimicrobial agents from selected plants of the genus the Rhus (Anacardiaceae)

Stephen Gituku

Title: Phytochemical and Biological studies of selected Kenyan plants of Rutaceae, Euphorbiaceae and Pittosporaceae families used in traditional medicine

Muitha Ndia James, MSc, writing

Title "Isolation, structure elucidation and antimicrobial activity studies of secondary metabolites from species *Grewia similis* and *Echinops hispidus*".

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## THESIS EXAMINATION

1. Martin Thuo (internal examiner): MSc thesis Kenyatta university (2005).
2. Gladys Nyamoita (Internal Examiner): MSc thesis at Kenyatta University (2008).
3. Mining K, John (External Examiner ): Msc Thesis at JKUAT University (2007).
4. Erastus Stanley Kamau Mwangi (External Examiner): Msc Thesis at Jomo Kenyatta University of Science and Technology (2006).

5. Peter Kirira Gakio MSc thesis Kenyatta university (2004)
6. Malebo Hamisi (Internal Examiner): Ph.D Thesis at Kenyatta University (2009).

## CONFERENCES/ SEMINARS/WORKSHOPS

- 2007 Role of chemistry in sustainable Agriculture and human wellbeing in Africa: CHEMRAWN XII Conference, Stellenbosch, South Africa ( **Attended**)
- 2005 Molluscicidal Stereoidal glycosides from *Solanum aculeastrum* and *arundo*. Kenya Chemical Society. 5<sup>th</sup> International Conference, Kenyatta University, Nairobi, Kenya. **(Attended and presented)**.
- 2007 Phytochemical and Molluscicidal Studies on some of the Kenyan species of the Genus *Solanum* Graduands' seminar, Kenyatta University, Nairobi, Kenya.**(Attended and presented)**.
- 2001 Isolation, characterization and Molluscicidal Activity Evaluation of Compounds From *Solanum aculeastrum*): The 9<sup>th</sup> Symposium of The Natural Products Research Network For Eastern and Central Africa [NAPRECA], Nairobi, Kenya.**(Attended and presented)**.
- 2001 Molluscicidal activity of the aqueous extracts of *S. aculeastrum* and *arundo* Natural Products Research Network For Eastern and Central Africa [NAPRECA] Kenya Branch Symposium, Kenyatta University, Nairobi, Kenya.**(Attended, presented)**.
- 1999 Molluscicidal Steroidal Alkaloid from *Solanum aculeastrum* The 3<sup>rd</sup> Kenya Chemical Society International Conference, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya. **(Attended and presented)**.
- 1999 Phytochemical and Molluscicidal Studies on some of the Kenyan species of the Genus *Solanum, aculeastrum* and *arundo* of the workshop on Medical and Veterinary Malacology in Africa; Harare, Zimbabwe.**(Attended and presented)**.
- 1993 Larvicidal and molluscicidal activity of flower head extracts of Kenyan *Spilanthes*: Inaugural Conference of the Kenya Chemical Society, Nairobi, June, **(Attended and presented)**.

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## CONVENING, COORDINATION AND MANAGEMENT OF CONFERENCES

2001

- Involved in the organization, coordination and management of the 1<sup>st</sup> symposium of Natural Products Research Network for Eastern and Central Africa, Kenya Branch (NAPRECA-K) held at Kenyatta University

2005

- Kenya Chemical Society. 5<sup>th</sup> International Conference, Kenyatta University, Nairobi, Kenya.

## PUBLICATIONS/JOURNAL ARTICLES

- Peter G. Kirira, Geoffrey M. Rukunga, **Alphonse W. Wanyonyi**, Charles N. Muthaura, Geoffrey M. Mungai, Alex K. Machocho and Isaiah O.Ndiege (2007). *Tigale diterpenoids from the stem bark of Neoboutonia macrocalyx* . Journal of natural Products **70** (5)

- P. G. Kirira, G.M. Rukunga, **A.W. Wanyonyi**, S.A. Omar, F. Otolu, G.M. Mungai, I. O.Ndiege (2006). Anti-plasmodial activity and toxicity of extracts of plants used in traditional malaria therapy in Meru and Kilifi Districts of Kenya. *Journal of Ethnopharmacology*, 403- 407
  - **Wanyonyi A. W.**, Chhabra S. C., Mkoji G., Udo E. Njue W. Be. Mungai (2005). Molluscidal Steroidal Alkaloids from *Solanum Species*. In the Proceedings of 5<sup>th</sup> International Conference of Kenya Chemical Society, Kenyatta Universty, Nairobi. Kenya, Pp 239-246
  - Eratus K. Mwangi, Alex Machocho, Paul K. Tarus, Joseph M. Keriko, Sumesh C. Chhabra. **Alphonse W. Wanyonyi**. and Hamis Malebo (2005). PytochemicalStudies of *Teclea trichocarpa* and *Albizia anthemintica*. In the Proceedings of 5<sup>th</sup> International Conference of Kenya Chemical Society, Kenyatta Universty, Nairobi. Kenya, Pp 261-267
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  - Paul Tarus, MSc; Sumesh Chander Chhabra, MSc, PhD; **Wanyonyi Alphonse Wafula**, MSc, PhD and Caroline Lang'at<sup>1</sup>, MSc, PhD (2004). Fermentation and Antimicrobial Activities of Extracts from different species of Fungus belonging to genus, *Trichoderma.*, *African Journal of Health Science* **11**, (23),33-34.
  - P.K. Tarus, S.C. Chhabra, C.C. Lang'at-Thoruwa, **A.W. Wanyonyi** (2003). Bioactive Metabolites From *Trichoderma Harzianum* And *Trichoderma Longibrachiatum* *Bulletin of the Chemical Society of Ethiopia* **17** (2) 185-190
  - **Wanyonyi A.W**, Chhabra S.C., Mkoji G., Njue W. Tarus P. K. (2003). Molluscidal and Antimicrobial Bioassays of aqueous and methanolic extracts of *Solanum aculeastrum* *Fittoterapia*, 298-301) \*\*
  - **Wanyonyi A.W**, Chhabra S. C., E. Njue W. Tarus P. K (2003). A novel glycosidic steroidal alkaloid from *Solanum aculeastrum.*, *Bulletin of the Chemical Society of Ethiopia* **17** (1) 61-66
  - **Wanyonyi A. W.**, Chhabra S. C., Mkoji G., Udo E. Njue W.(2002). Bioactive Steroidal Glycosides from *Solanum aculeastrum*, *Phytochemistry* **59**, 79.
  - **Wanyonyi A. W.**, Chhabra S. C., Mkoji G., Udo E. Njue W (1999). Molluscicidal properties of aqueous extracts of *Solanum aculeastrum* and *S. arundo*. In the Proceedings of the workshop on Medical and Veterinary Malacology in Africa; Harare, Zimbabwe, Pp 365-368
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