

African Natural Products Network (AFNNET)



University of Nairobi (UoN)



Makerere University (MAK)



Sokoine University of Agriculture (SUA)

AFNNET Partners

**Makerere University (MAK)
Prof. David John Kabasa
Dr. Samuel Okello**

**Sokoine University of Agriculture (SUA), Tanzania
Dr. Robinson Hammerthon Mdegela**

**University of Nairobi (UoN), Kenya
Dr Stephen Gitahi Kiama**

Project specific objectives

- Upgrade existing MSc-level junior academic staff to PhD-level Natural Product (NP) scientists & engineers
- Develop and pilot a non-terminal regional Masters & PhD curricula by coursework & thesis in NP sciences, technology, value chain and management
- Build regular and efficient communication among nodal Universities, other NP networks and stakeholders (Government and Private)

- Engage more the government and the local NP industry in the actions of the AFFENET
- Increase availability of research opportunities for academic staff and students
- Increase the number and quality of women scientists with MSc- and PhD-level training in Natural Products
- Enhance RISE faculty staff retention at universities in the region

Implementation Plan

- Upgrade human resource base
 - At least 10 existing MSc-level staff to PhD level
 - At least 8 BSc level to MSc level
 - Boost NP experts pool
- Develop harmonised regional MSc program in NP technology & value chain management
- Integrate E-learning Technology
- Build efficient communication among stakeholders - website

Implementation Plan (Cont')

- Engage Government & local NP industry in network actions
- Increase research opportunities for staff & students
Scientific conferences & seminars
- Increase number and quality of women scientists
>30% women candidates
- Enhance staff retention at universities
Joint senior & postdoc supervision of students

Implementation

- **Carnegie Rise Project Inception Meeting**
 - Organized by the African Academy of Science (AAS) during 5th – 8th October 2008 at Imperial Hotel in Nairobi Kenya
- **AFNNET Inception Workshop**
 - Held from 10th to 12th November, 2008 at Makerere University, Kampala
 - Intended to orient the main stakeholders and leaders in the operation of the project and develop an initial framework for the MSc curriculum template

- **Recruitment of PhD Students**

- AFNNET PhD Scholarships
- Well designed point matrix (as advised by Universities) was used to assess applicants for PhD scholarship Award

- **Appointment of project implementation teams in each node**

- Makerere University (15 members)
- University of Nairobi (8 members)
- Sokoine University of Agriculture (8 members)

- **Development of AFNNET website & brochures**

Accomplishments

- Training of PhD students
 - 10 students have been enrolled
 - 5 Makerere University
 - 3 University of Nairobi
 - 2 Sokoine University of Agriculture

Makerere University

- **Ms. Namukobe Jane**

- Research Topic: “Bioactive compounds from selected traditional medicinal plants used by communities and Chimpanzees in and around Kibale National Park”

- **Mrs. Esther Ebifa Othieno**

- Research Topic: “Neglected foods and beverages: A case study of Tamarind tree products use in selected areas of Uganda”

- **Mr. Patrick Ogwang Engeu**

- Research topic (amended in full proposal): “Artemisia annua malaria prevention; Artemisinin resistance and predictors, adverse effects and incidence of malaria among low income workers in Wagagai Entebbe”

- **Mr. John Odda**

- Research topic (as amended in full proposal): “Standardization of Crude Drugs Derived from Antimalarial Medicinal plants in Tororo District in eastern Uganda: An Innovation for Value Addition”

- **Mr. Pelegrine Sebulime**

- Research topic (as amended in full proposal): “Nutritional quality of chicken meat and efficiency of production of indigenous and cross-bred chicken using

Sokoine University of Agriculture

- Faith Mabiki (F) (Tanzania)
 - Potential Bioactivity of Extracts and Compounds from *Synadenium glaucescens* Pax. (Euphorbiaceae)



- Gaymary Bakari (F) - Tanzania
 - Anthelmintic and Antimicrobial Activities of *Commiphora Swynnertonii* in Local Chickens



University of Nairobi

- Irene Kamanja
 - Pharmacological and Toxicological study of *Clerodendron myricoides*, an ethnomedical herbal remedy used in Kenya
- Stanley Nderitu Wambugu
 - Evaluation of pain alleviating anti-inflammatory and anti-rheumatoidal properties of selected Kenyan medicinal plants
- Joseph Mwanzia Nguta
 - Pharmacological and Toxicological study of antimalarial herbal plants in selected areas of Kenya

Gender consideration

- Target > 30% women
- Status
 - Uganda – 40% women
 - Kenya – 33.3% women
 - Tanzania – 100% women
 - **Overall – 50% women**

Development of Regional MSc in Natural Products Technology & Value Chain Management

- In progress
- Makerere University
 - Awaiting for approval by the SENATE Graduate Committee
- Sokoine University of Agriculture and Makerere University
 - Awaiting for stakeholders workshop before presenting to the Faculty Board and higher organs
- Additional fund to support development of MSc curriculum
 - Discretionary proposal received 50,000 US\$ from Carnegie RISE

Structure of the Regional MSc curriculum in Natural Products Technology & Value Chain Management

Course	Title
MNP7101	Introduction to Natural Products Science
MNP7102	Natural Products and the Environment
MNP7103	Analytical Techniques for Natural Products
MNP7104	Natural Products and Biological Systems Interactions
MNP7105	Bio-prospecting and Value Chains
MNP 7106	Internship/Attachments
MNP 7208	Natural Products Safety and Efficacy
MNP 7209	Research Methods and Communication
MNP 7210	Natural Products Entrepreneurship and Economics
MNP 7211	Natural Products Policy, Gender and Ethics

Development of the RISE- AFNNET network website

- AFNNET website
www.rise-afnnet.net
- University websites
www.makerere.ac.ug
www.suanet.ac.tz
www.uon.ac.ke
- Production of brochure
1 brochure

Challenges & Interventions

- Harmonization of University calendar/Almanac with Network work plan e.g development of regional MSc program
 - Institutionalization of the program
 - Harmonization of credits/credit transfer
 - Data base of node competencies
- How to ensure that the students progress at the same pace with the funding framework (time table)
 - Starting research before proposal approval
 - Monthly progress report
 - Monthly student seminars

- Underdeveloped private sector in NP industry
 - Capacity building along the entire chain – community, mid-career to professional and academic (trainers) levels
- NP research not sufficiently linked to curriculum and value chain development
 - Harmonize and integrate research findings into curriculum
 - Develop short courses
 - Will take time for majority of students to pursue as a profession
 - Need for scholarships in the initial phase

- How to make contacts with other networks or Institutions with facilities for research in NP
- Scaling-up to become a truly vibrant African NP Network
- Inadequate laboratory equipments and experts
Value chain management
- Few women who can be trained at high levels (PhD, MSc) to mainstream gender into NP industry

Thank you for listening

