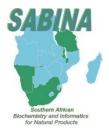




SOUTHERN AFRICAN BIOCHEMISTRY AND INFORMATICS OF NATURAL PRODUCT PROGRESS REPORT

SABINA SECRETARIAT

RISE Annual review Meeting, Hilton Nairobi, 27-29 September, 2009

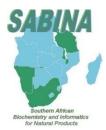


Introduction



- Grant –USD800,000 from Carnegie-IAS RISE for 2.5 years
- 6 Key and broad research areas
 - Molecular biology/functional genomics
 - Natural product chemistry
 - Synthetic chemistry
 - Biochemistry
 - Food science
 - Bioinformatics

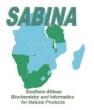
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Project purpose and goal

- Implementation of proactive postgraduate programmes in chemistry/biochemistry and bioinformatics of natural products. The specific objectives are:
 - i. Implementation of both PhD and MSc programmes.
 - ii. Development of networks integrating chemical and biological sciences.
 - iii. Strengthening networking among the departments of chemistry and biochemistry in key SADC universities.

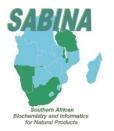
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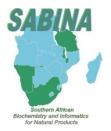


- Innovative networking in chemistry and biochemistry of natural products among SADC universities and research institutes.
- Cadre of doctoral and MSc young men and women actively involved in studies on the chemistry and biochemistry of natural products using top class facilities.
 - 12 PhD and 18 MSc graduates by 2014
- Greatly enhanced participation in publication of scientific results in international journals.



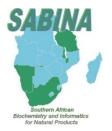


- Innovative networking in chemistry and biochemistry of natural products among SADC universities and research institutes
 - •Secretariat in place and functional in Malawi
 - Project Manager recruited, working and visited ACGT for hand-over in June, 2009
 - Financial management systems at UNIMA in place
 - •Systems for networking and communication amongst the partners in place
 - •Collaborative research work and training of staff/students
 - •SABINA website populated
 - •One physical planning meeting held at UP, December, 2008





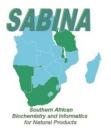
- Cadre of doctoral and MSc young men and women participating actively in studies on the chemistry and biochemistry of natural products
 - Systems of recruiting and co-supervision of students developed
 - Joint supervision of students established
 - Main research areas delineated and agreed
 - Conditions and forms of student engagement developed
 - •Two adverts inviting PhD and MSc candidates
 - •Twelve students
 - •2 PhD and 4 MSc students awarded scholarships in December, 2008 (3 male + 3 female)
 - 4 PhD and 2 MSc students offered scholarships in mid September, 2009 (4 male + 2 female)
- Five of the 2009 candidates have accepted the offer and now registering with the various universities
- Email communication facility used for assessing and selecting the top candidates



SABINA Fellows



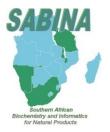
| Fellow | University | Study Area | Superviors |
|---------------------------|------------|--|---|
| Justin Omolo(TZ) | WITS, PhD | Phytochemistry and synthesis of Bioactive Natural products isolated from Tanzania medicinal plants | Prof Charles De Koning Dr. Vanesh Maharaj |
| Nicholas Mphangwe(MW) | UP, PhD | Genetic studies and use of molecular markers in tea breeding and selection | Prof Zeno Apostolides Dr. H. Nyirenda |
| Tinotenda Shoko(ZW) | UNIMA, MSc | Flavour Chemistry of some indigenous fruits and vegetable in Malawi | Prof JDK Saka Prof John Taylor Dr. C. Erasmus |
| Ms Secilia Ilonga(NM) | UNAM, MSc | Screening of Anticancer and antioxidants compounds from selected indigenous plants | Dr Martha Kandawa- Schulz Dr S. Lyantagaye |
| Ken Ngwira(MW) | UDSM, MSc | Natural products chemistry | Dr. Quintino Mgani |
| Ms M. Pelly Malebe(SA) | UP, MSc | Development of genetic markers for tea | Prof Zeno Apostolides |



SABINA Fellows

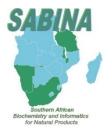


| Fellow | University | Study Area | Superviors |
|------------------------------------|------------|---|---|
| Adushan Pillay(RSA) | Wits, PhD | Synthetic Chemistry | Prof Charles De Koning Dr. Vanesh Maharaj |
| Ms. Petrina Kapewangolo (NM) | UP, PhD | Natural Products Chemistry | Prof Zeno Apostolides Dr V Maharaj Dr Quntino Mgani |
| Godwil Madamombe (TRFCA-Zw) | UP, PhD | Quality of Tea | Prof Zeno Apostolides Dr. H. Nyirenda |
| Kumbukiani Nyirenda | UNIMA, PhD | Nutracueticals from mushroom and other plants | Prof John Saka Dr Vinesh Maharaj Dr E Fabiano |
| Ms Moola Nyambe(NM) | UNAM, MSc | Natural products chemistry | Dr Martha Kadwa Schultz Dr Sylvester Lantangayi |
| Ms Liberata Mwita(TZ), | UP, MSc | Bioinformatics | Dr Olev Prof Jane Morris |



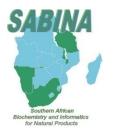


- Resource mobilisation-a proposal to EU-ACP for:
 - Support to Co-ordination and networking in applied research
 - Strengthening the SABINA S&T consortium through additional training activities for scientists
 - Linking the SABINA network to policy makers, farmers and entrepreneurs
 - Support to management of research activities and reinforcement of research quality





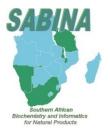
- Resource mobilisation-a proposal to EU-ACP for:
 - Development of a knowledge management system for SABINA (Virtual Research Environment)
 - Provision of training to the scientific community in research methodology, project management, research fund management and grant writing
 - Establishing external peer review and evaluation procedures for SABINA
 - Extending the nodes to other institutions in SADC region
- Great promise of being funded; in the final evaluation phase



Scientific publishing and networking



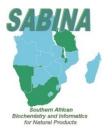
- Greatly enhanced participation in publication of scientific results in international journals
 - This would be achieved starting from Year 2 of the project implementation
- Adverts for postdocs and equipment support posted in June, 2009
 - One postdoc application received
- Participation and linkages to SANBIO of NEPAD- capacity building
- Academic Director represented SABINA and IPICS project at the ISP/AU/AAU conference on cooperation in basic science, 1-3 Sept, 2009
 - Jointly supported by the two projects
 - Wider dissemination made
 - Executive Director of African Academy of Sciences, Prof Mohammed Hassan highlighted this project in his presentation at the Conference
- Mid annual report submitted in time



Challenges



- Student support administration
 - Student registration/admission: study
 visas/permits, medical Aid, SAQA requirement
 - Some parent institutions are not able to support airfares for their staff
 - Variable fees despite the SADC protocol on local fee application to other SADC nationals
 - Different academic calendars-student registering at different times
 - Reporting on students' progress variable



Challenges

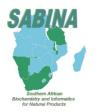


• Network management

- Members being committed with other core activities at their work places leading to delays in participating in project management
- Few individuals appear to be very active and always in the loop; others must be chased to provide feedback

Resource administration

- Delays in receiving invoices for UNIMA to process transfers
- UNIMA required to be registered as a vendor for invoice processing
- Currency fluctuations-economic crisis



SABINA Network partners



- MALAWI
- Chancellor College, University of Malawi (Email: sabina@chanco.unima.mw)
 - Prof John DK Saka, Project Academic Director, Chemistry Department
 - Mr Frank Ngonda, Project Manager, Secretariat
 - Mr Calvin Ziba, Project Accountant, College Finance Office
 - Dr Hastings Nyirenda, Tea Research Foundation of Central Africa (TRFCA), Malawi
- NAMIBIA
 - Dr Martha Kandawa -Schultz, Department of Chemistry and Biochemistry, University of Namibia, Namibia
- SOUTH AFRICA
 - Prof Jane Morris, African Centre for Gene Technologies (ACGT), South Africa
 - Dr Vinesh Maharaj, Centre for Scientific and Industrial Research (CSIR), South Africa
 - Prof Zeno Apostolides, Department of Biochemistry, University of Pretoria, South Africa
 - Prof Charles de Koning , School of Chemistry, Witwatersrand University, South Africa
- TANZANIA
 - Dr Sylvester Lyantangayi,, University of Dar es Salaam, Tanzania

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