Establishing a Southern African Natural Products Partnership

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• Interlinked problems of health, nutrition and food security in developing countries
• Developing countries need to be partners in finding solutions, not just recipients of products developed elsewhere
• This will involve creating a critical mass of expertise across the whole innovation chain

• Discovery ➔ Development ➔ Implementation

The starting point
Why natural products?

- Southern Africa has a vast range of biodiversity
- Heritage of indigenous knowledge is maintained by traditional healers who make use of plant derived medicines
- Interest in indigenous fruit and vegetables with health promoting properties
- Non-indigenous crops such as tea are commercially grown and there is demand to improve their health promoting effects
- Need for scientific validation of properties, potential for improved public health and value added exports
• Carnegie Regional Initiative in Science and Education aims to increase the population of qualified faculty in Africa’s universities through networked training of PhD- and MSc-level scientists

• SABINA partnership focuses on training of scientists in natural product biochemistry, chemistry and informatics for application in medicine, health promotion and agriculture

SABINA – a Carnegie RISE network
- University of Malawi –
  - Prof J Saka, Academic Director
- University of Dar es Salaam
- University of Namibia
- Tea Research Foundation of Central Africa
- University of Pretoria
- University of the Witwatersrand
- CSIR, South Africa
  - South African organizations coordinated through the office of the African Centre Gene Technologies
• First batch of students recruited end 2008, started work 2009
• Currently 7 PhD students and 6 MSc students recruited from all countries in the network
• All students co-supervised by faculty from more than one country
• Students able to access advanced equipment in South African laboratories
• Expertise ranges from synthetic chemistry to biochemistry, molecular biology and bioinformatics
SABINA students in the network
Challenges – the need for policy and support actions

- How do we develop the full value chain from academic research to implementation?
- How do we build a truly integrated network of researchers?
- How do we deal with intellectual property, protection of indigenous knowledge and biodiversity across country borders?
- How do we engage with policy makers, entrepreneurs, farmers, health workers etc?
• SABINA partnership is actively training scientists in the development of natural products
• BUT the capacity, knowledge management systems, supportive policies and understanding of the requirements of the full value chain are not in place (institutionally, nationally or regionally)
• Science and technology not translated into products to meet the challenges of health and food security.
Challenge 1 – collaboration and network integration

1. Scientific workflow
2. Training / mentoring etc
3. Real time communication
4. Report writing
5. Dissemination of findings (artifacts)
6. Identification of research area
7. Literature review & indexing
8. Identification of collaborators
9. Identification of funding sources
10. Proposal writing
11. Project management
12. IP Management

Researchers usually start here.
Challenge 2 – training of scientists in appropriate areas

- Project management
- Grant proposal writing
- Business and financial planning
- IP management
- Scale up and processing
  - Etc etc....
Interactive workshops between scientists, farmers, entrepreneurs, holders of indigenous knowledge
Support for implementation plan development for a selected project
Creation of a demonstration facility
Open days for farmers and agroprocessors
Challenge 4 – establishing an enabling policy environment

Many countries in the region do not have policies or legislation governing access to and use of biological resources, benefit sharing, indigenous knowledge systems, plant breeders’ rights etc.

IPR legislation not strong in the region

ACTIONS:

- Workshops between policy makers, scientists, farmers, traditional healers/holders of indigenous knowledge and entrepreneurs
- High Level Panel on IP Management leading to a SADC policy framework on IPR and use of biological resources
• By partnering we can move forward
• We welcome international collaborations..

We are just beginning...