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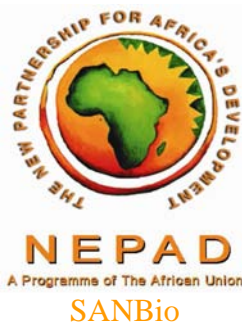
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Southern African Network for Biosciences

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## **REPORT ON SANBIO NETWORK DIRECTOR'S VISIT BOTSWANA**

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### **Background**

The SANBio Network Director visited stakeholders in Botswana from 17-19 April 2008 to discuss with them areas for collaboration on SANBio initiatives that have commenced and those that are in the pipe line. This was also an opportunity for both parties to identify areas where NEPAD and its international partners can add value to the ongoing biosciences initiatives within Botswana

During this visit the Network Director was hosted by Dr. Pearl Lebatha, Director of the Centre for Continuing Education at the Botswana College of Agriculture. A meeting with stakeholders was held on 18<sup>th</sup> April at the CCE. At the time the College was preparing for end of semester examinations and many of the staff were tied up. As such the attendance was low with a total of about 12 people. A list of participants is attached.

### **Programme**

- Introductions – Dr. P. Lebatha
- Welcome by Head, Crop Sciences – Prof. Njogu
- Food plants research – Prof. Armateifio
- Medicinal Plants research – Dr. Mothanka
- Indigenous crops research – Dr. Mogotsi
- AU/NEPAD Science & Technology Consolidated Plan of Action – Prof. Mumba
- CesrIKI Program Coordinator – Dr. Keitseng Nkah Monyatsi

- SANBio Business Plan and its Implementation – Prof. Mumba
- SanBio Flagship Project on Scientific Validation of Traditional Medicines for HIV/AIDs and Opportunistic Infections – Dr. N. Moodley
- Discussion/Networking - All

## Presentations

1. Dr Armateifo group leader for the Food Plants Research in the Department of Basic Sciences gave a presentation on Edible Plants of Botswana. The group focuses on collection, identification of indigenous plants from Botswana and determining their nutrient composition and anti-nutrient factors.
2. Dr. Motlhanka made a presentation entitled, ***Commiphora glandulosa schinz: A medicinal plant from Botswana with antibacterial activity.*** His work involves verification of claims by traditional healers by extracting plant materials using various solvents and techniques. Thereafter the extracts are subjected to a number of bioassays including:
  - Antibacterial assays
  - Free radical scavenging assays
  - Antibiotic modulation assays
  - Screening for anti-inflammatory agents
  - Anticancer agents
2. Dr. K.K. Mogotsi from the Crop Sciences Department gave a presentation entitles **“Research & Development of potential New Crops for Botswana: A case of Moroma Bean and Kalahari Desert truffles”**. The main thrust of this work is to determine nutritional values with the view to domesticating some of the wild plants for food and foliage. She highlighted some of the challenges facing her work as:
  - limited human and institutional capacity
  - Need to develop rapid methods and protocols for propagation
  - Lack of taxonomists for identification purposes
  - Partnerships
  - Policy reforms
  - Financial support
3. In his first presentation Prof Mumba gave a summary on the Africa’s Science and Technology Consolidated Plan of Action highlighting the following issues:
  - Background
    - Role of STI in Africa
    - Africa’s agenda for STI

- AU/NEPAD Consolidated Plan of Action
  - Programmes of the CPA
  - African Biosciences Initiative
  - Progress on implementation of the CPA
  - Funding mechanisms
  - Challenges
  - Conclusions
3. Dr. Ketseng Nkah Monyatsi, Programme Coordinator at the Centre for Scientific Research Indigenous Knowledge & Innovation (CESRIKI) introduced the centre under the following sections:

**Objectives of the Centre**

- To be an intellectual and cultural centre that draws upon national indigenous knowledge base and promotes Botswana's social and cultural heritage
- To develop IKS-conscious scientists who recognize the important role of the resource-rich but economically disadvantaged communities
- To share IK with the communities to enrich, develop and add value to, and develop that knowledge in the language of the community and facilitate the sharing of discoveries and innovation by scientists
- To pursue human-centred knowledge development that will promote people-to-people learning
- To seek and transform the scientific ethos and change-ethics and practices to ensure a genuinely reciprocal relationship between the rural communities and those in the formal sector, etc.

**Planned Projects:**

- Ethno-survey
- Establish contacts with knowledge holders
- Establish contents with various stakeholders
- Encourage scientists to research on data collected
- Educate Botswana about the importance of IKS
- Capacity building

**Progress made**

- Office established at the University of Botswana
- Funds secured for ethno-survey and the seminar series
- High level stakeholder consultations have already started

**Where we are:**

- Building a team of experts needed for the ethno-survey
- Literature review and consultations with those that have done some work on IKS before.

4. Dr. Niven Moodley from the CSIR in South Africa gave a summary of the

background and work progress on the SANBio Flagship Project on the Validation of Traditional Medicine for HIV/AIDs and Opportunistic infections. He specifically highlighted the following issues:

- Classic, rational approach to drug discovery
- Accelerated discovery based on IK of medicinal plants
- Model for Collaboration
- Focus areas
  - Product conceptualization
  - Dissemination of results
  - Processing and manufacturing
  - Quality and Standardization
  - Clinical studies
  - Supply of material
- Preliminary results on biological evaluation of a traditional remedy code-named SF2000 against HIV1 Subtype C. The data showed efficacy of the plant extract against HIV 1 subtype C.
- Way forward: Further research and development of the product as a herbal remedy to complete proof of concept

5. In his second presentation, he introduced the SANBio Network and the Business Plan highlighting the following issues:

- Genesis of SANBio
- Mission and vision of the SANBio
- Governance and Management structure
- Priority R & D Projects
- Implementation status of 5 R & D Projects
- Mode for regional collaboration
- Funding mechanisms
- Challenges
- Conclusions

He later gave out copies of the CPA and the Biotech Report and invited participants to access the AMCOST Website ([www.nepadst.org](http://www.nepadst.org)) for more information.

### **General Discussions & Networking:**

The meeting identified potential for collaboration and engagement with Botswana in the area of traditional medicine. Dr. Motlhanka was invited to submit a proposal focussing on bioassays against Opportunistic infections.

Another area with potential for collaboration is the Centre for Scientific Research Indigenous Knowledge & Innovation (CESRIKI).

## **Afternoon Programme**

In the afternoon the delegation paid a courtesy call on Mr Stevie Monna, the SANBio Steering Committee Member for Botswana at the Ministry of Environment, S & T. Prof. Mumba provided a background to Mr Monna on the SANBIO activities since its inception. He spoke of the importance of Botswana to become more participative in the projects currently being investigated and encouraged Mr. Monna to attend the next SANBIO steering committee meeting. Prof. Mumba spoke of Botswana's application to become a node in on Indigenous knowledge in 2005 for which a decision was deferred due to the steering committee member not being present and whether Botswana will seek to re-apply to become such a node. In response Mr. Monna indicated that he did not have much information on the subject as he had not been fully briefed by Dr. Edson Selaolo who was previously in charge of SANBio matters. He promised to revisit some of the documentation on SANBio in his office in order to determine exactly what needed to be done. He then briefed us about the role of his Ministry as the national focal point for the Convention on Biodiversity (CBD).

Later in the afternoon we visited the laboratories of Professor Berhanu M. Abegaz in the Chemistry Department at the University of Botswana. Prof Abegaz laboratories has become a centre of excellence in Africa and provides analytical services to institutes throughout the continent. Prof. Abegaz was in turn briefed on the role of SANBIO and specifically the SANBIO Flagship project and was encouraged to participate on the project by way of completing a proposal application for work to be undertaken in Botswana.

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## List of Participants

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