Intra-African Cooperation in Chemical Sciences: The experiences of NABSA and some lessons

Berhanu M. Abegaz, Coordinator, NABSA

http://www.nabsaonline.org
Outline

- Introduction
- Analytical services to African Scientists
- Research training
- Research cooperation
  - Regional
    - Medical Research Council – Cape Town
    - University of Pretoria
  - International
    - CESRIKI Program – Botswana – Madagascar – Zimbabwe – OSU and RU (USA)
    - GIBEX program
- Conclusions
Introduction

Founded in 1992 in Gaborone, during the 5th ICCA

Signatories

- Thomas Odihambo – ICIPE, Kenya
- Shem Wandiga UoN, Nairobi
- Berhanu M. Abegaz, AAU, Ethiopia
- David Key, UZ, Zimbabwe
- Negussie Retta, AAU, Ethiopia
- Walter Benson, IOCD, USA
Objectives of NABSA

- To promote the development of scientific activities in Africa by offering analytical, bioassay and CD-ROM literature support services.

- To cooperate with active scientists in a joint short-term intensive-research undertaking by inviting them to the reasonably well equipped laboratory in Botswana.

- To promote the professional development of young scientists by arranging sub-regional symposia.
### NABSA Officers

#### In the University of Botswana

- **Prof. Berhanu M. Abegaz** - Coordinator
- **Dr. Merhatibeb Bezabih** - NMR services
- **Prof. Mathew N. Nindi** - Mass Spectral services
- **Mr. Edgar Mfosi** - Admin/research assistant

#### External

- **Prof. J. O. Midiwo** - Nairobi
- **Prof. Ermias Dagne** - Addis Ababa
- **Prof. P. Rasoanivo** - Madagascar
Analytical Services to African Scientists

- Lack of Equipment is a major constraint in Africa
- UB’s willingness to share facilities
Analytical services cont’d

NMR MAP of Africa

Distribution of NMR spectrometers in Eastern and Southern Africa

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2007
Analytical services cont’d

Analytical services to African Scientists

Type of services
- Spectroscopic services
  - Nuclear Magnetic Resonance (NMR)
  - Mass Spectrometric Services
- Biological assays
  - Antiplasmodial and antimalarial assays
  - Mosquito larvicidal assays
  - DDT resistance reversal
  - Chloroquine reversal assays

Literature
8300 NMR AND
1741 MASS SPECTRA
OFFERED TO
12 COUNTRIES DURING
2000-2006
NMR services during 2000-2006

Five out of 12 countries received 92% (7698) services.

Total for the period was 8300.

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<td>Nigeria</td>
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<td>Kenya</td>
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<tr>
<td>Tanzania</td>
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Research training

- E. Dongo - Cameroon
- B. Ngameni - Cameroon
- H. Camden - Cameroon
- M. Tscheuendem - Cameroon
- S. Kouam - Cameroon
- T. Idowu - Ile-Ife
- S. Famuyiwa - Ile-Ife
- T. Kazembi - Zimbabwe
- A. Ahmed - Sudan

<table>
<thead>
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<td>Cameroon</td>
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<td>Others</td>
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Research cooperation

Regional

– Medical Research Council – Cape Town – Malaria project
– University of Pretoria – Weeds project

International

– cesrIKi Program – Botswana – Madagascar – Zimbabwe – OSU and RU (USA) – Malaria project
– GIBEX program – Trypanosomiasis project
Intra-African Research cooperation with other African Scientists

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Prof P. Rasoanivo

Cape town
Dr. G. Matsabisa
Conclusions

- Networks can be cost-effective and efficient.

- Networks are viable mechanisms to enhance higher education.

- NABSA success is attributed to the fact that it is driven by active scientists.

- NABSA has learned the advantages of shared benefits from collaborative research.
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Acknowledgments

- International Programs in Chemical Sciences
- Academy of Sciences for the Developing World (TWAS)
- The University of Botswana
- South African – Cooperation Fund for Scientific Research and Technological Developments
- ANSTI, OPCW

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