

HSRC RESEARCH OUTPUT

4075

THE NATIONAL COMMISSION ON SCIENCE &
TECHNOLOGY (NCST)
IN COLLABORATION WITH
THE OFFICE OF RESEARCH & DEVELOPMENT (UB)

INVITES YOU TO A WORKSHOP TITLED

***Botswana: Health, Science and a Dynamic
Economy***

*How to set priorities for biomedical and related R&D, foster innovation in biotech
and other industry,
and advance health care services?*

*This workshop will focus on international experiences from localized 'innovation
clusters' in biotech and health care, involving a wide range of stakeholders,
including researchers and other life science experts, hospital clinics, and business
firms.*

Date 3 December, 2004
Venue: UB Library Auditorium
Time 8.15 am – 16.00 pm

Guest Presenter
Other Presenters
Sebusang

Prof Jan Annerstedt
Prof. Jo Lorentzen, Prof C Studman and Dr Sebusang

Lunch, morning and afternoon tea will be served

(To register, please contact Ms Tumelo Motsumi at BOTEC 3914161, Tumelo Motsumi [tumelo@botec.bw])

Why a workshop on Science, Health, and the Economy?

The Botswana National Commission for Science and Technology is currently reviewing the country's priorities in research, science and technology. This exercise includes new methods of priority setting and new means to mobilize resources across sectors to foster a more innovative economy and society. For these purposes, the Commission conducts dialogues with stakeholder groups, examines available resources for science, technology and innovation, cooperates with specialists in other countries, etc.

This workshop is focused on the relations between science, health and the economy, using examples mainly from North America, West Europe and East Asia, where local biomedical clusters of competencies have evolved and become successful in fostering innovation in the health care services with a view also on related business development. The workshop theme is broad - Public Health, Science and a Dynamic Economy - and should open up for new ways of perceiving and using available resources in Botswana and from outside of the country. The focus of the deliberations is biomedical R&D and innovation in biotech industry and in health care services, but there is no limit to related issues that could be brought into the deliberations of the workshop.

The National Commission of Science and Technology is committed to involve stakeholders from all sectors with an interest to cooperate in fostering relations between science, health and the economy focused on biomedical and broader biotechnological capabilities.

For a summary of the workshop, please see below

Friday, December 3, 2004

Morning Session 09.00 – 12.00

Biomedical centers across the world: Why are they successful?

Using international examples in biomed and biotech, the morning session should open up for questions such as How to set priorities for R&D and to sustain innovative activities? Why and how to involve a wider range of stakeholders and to attain synergy effects also among private sector partners?

1. Benchmarking biomedical competencies located in 20 cities across the world: Which are the principal success factors?

To initiate the workshop deliberations and provide a set of up-to-date reference points, Prof. Jan Annerstedt will summarize a recent study comparing some of the world's biomedical centers, while focusing on success factors of relevance to Botswana.

2. Shaping a cluster around biomedical research: How to benefit from science-clinic-industry relations both locally and internationally?

Using primarily the design and implementation strategy of the Shanghai Fenglin Biomedical Center in China, Jan Annerstedt will introduce a discussion on how to set priorities and organize links between scientific institutions, hospital clinics and business firms into effective 'clusters of competencies'.

3. Biotech clustering and industry development: The case of South Africa.

Prof. Jo Lorentzen will describe the successes and failures of South Africa's biotech industry. The focus will be on the interaction between industry and higher education. Prof. Lorentzen will also propose how we might better understand the dynamics of learning in the biotech sector, especially the upgrading to 'third-generation' biotechnology, and discuss the benefits of cross-border research in Southern Africa.

Afternoon Session 13.00 – 15.00

A biomedical cluster in Botswana: How to achieve success?

The afternoon session puts the focus on Botswana. Are the international experiences in biomed/biotech relevant and useful? What could be learned from these on-going experiences? How to translate the best of these experiences into the unique context of Botswana of today and of tomorrow? Which are the exceptional qualities of Botswana that would foster a more dynamic economy based on more effective use of the resources for science, technology and innovation?

4. Making it happen: Recent experiences from building new capacities at the University of Botswana and among its partners in science and technology.

Prof. Cliff Studman will introduce the discussion on how Botswana could achieve by summarizing the past few years of human resource development, institutional and other enforcements of research and related activity at University of Botswana and its partner institutions.

5. Finding the right mix: Biotech and indigenous knowledge systems.

Dr. Sebusang Sebusang will bring forward the conference themes and summarize the principal outcomes of the March 25, 2005, conference on 'Growing Botswana Through Science and Technology', organized by the University of Botswana Foundation, Botswana Insurance Fund Management, and the Botswana Trust for Harnessing of Science and Technology for Economic Development.

6. Shaping a biomedical cluster in Botswana: How to combine policies for public health, biomedical R&D, and innovation while building a broad platform of stakeholders, including industry, that will foster innovation?

To sum up the workshop deliberations, and to look forward to the actions needed, this roundtable discussion will be based on the introductions during the workshop and on inputs from all interested participants.

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Biotechnology in South Africa: What we (don't) know about it

Jo Lorentzen
Human Sciences Research Council
Cape Town

Government objectives and policy

- Promote biotech b/c of contribution to national priorities:
 - Human health, food security, environmental sustainability
- Dep. of Science & Technology (DST)
 - oversees NRF and NACI
 - implements National Biotech Strategy (2001)
 - coordinates eGoli Life Sciences Incubator and Acorn Technologies
 - funds NBN and BRICs: Cape Biotech, BioPAD, ECoBio (Durban Lifelab), PlantBio
- Also involved: dti, DoH, DoA, DEAT, DoL, DoE

Outline

- What we do know (macro perspective)
 - Government objectives
 - Industry structure and performance
- What we're exploring
 - 4 case studies of HE-industry interaction
- What we don't know (a micro perspective)
 - Scope, scale, and cycle of activities
 - Role of intellectual property rights
 - Biodiversity and indigenous knowledge systems
 - Technology transfer
 - Rewards and risks

Basic industry profile

- 47 core and 59 non-core modern firms (+2 p.a.)
- ~600 research groups, <1000 projects
- Most firms ≤ 50 staff (43% of sample = 1020 staff)
- Majority *not* working with GMOs
- But: use mod. techn. and/or develop new appl.
- Focus: human health > plant > indust > food & bev.
- Gauteng (41%), Western Cape (37%), KZN (15%)
- 2002 turnover:
 - by company > R300m
 - by products/services ≥ R368m