



“Turning Ideas into Industry”



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AUDIT OF THE SOUTH AFRICAN BIOTECHNOLOGY SECTOR

Thank you for taking the time to participate in this national audit of the biotechnology sector in South Africa. The results of this audit will be used as a quantitative baseline for measuring the growth of biotechnology over the next few years in response to new government interventions in the industry. The results will also be used to guide the allocation of resources and design of government instruments (such as funding schemes) for the development of the technology platforms that will be necessary to ensure the future competitiveness and economic growth of South Africa. The survey therefore aims to be as comprehensive as possible and requires some degree of effort on your part. The questionnaire will take on average 15-30 minutes to complete. Each question should be answered as accurately as possible in order to ensure high quality data and an accurate report on the state of the industry in South Africa.

Survey Endorsement

The survey is being undertaken by Idea to Industry, a biotechnology project management company, on behalf of eGoli BIO Life Sciences Incubator and the Department of Science and Technology (DST). We kindly request your assistance in completing this form and returning it to us by the due date (25 July 2003). Your participation in the audit is of great importance to the quality and depth of the results, and would be much appreciated. **It is also your opportunity to influence the allocation of future funds to biotechnology, particularly with respect to technology platforms and infrastructure development.** A report generated from the results will be sent to all survey participants as soon as it is available and will also be made available on the eGoli BIO website (www.egolibio.co.za).

Confidentiality

Information gathered in the survey will be held in the strictest confidence. Under no circumstances will Idea to Industry, eGoli BIO or DST, publish, release or disclose any information on, or identifiable with, individual companies or organizations. In addition, neither the completed questionnaires, nor the addresses of participants, will be released to any parties other than eGoli BIO, DST, or its participating initiatives. Only the aggregated data from this survey will be used in publicly available documents.

Due Date: 25 July 2003

Please email your completed forms to gatwin@netactive.co.za or fax them to (021) 715 3490 on or before the due date. We will be following up telephonically with all stakeholders and will be conducting telephonic or in-person interviews with a sample of the survey population. However, if you have any questions or comments before this time, please do not hesitate to contact Shelley Mulder at the above email address, or on 072 392 8828.



Notes on Completion of the Questionnaire

Please complete the questionnaire if your organization or research group fits into the following definition:

Organizations “using biotechnology” are those that use a set of techniques leading to the transformation of a substance or production of a product, and where living organisms, or parts thereof, are involved. The living material may be the object that is transformed or produced or may be used in the manipulation or production process.

A stakeholder is defined for these purposes, as any individual or organization that has an interest in or participates in biotechnology activities.

Biotechnology activity can be divided into 4 categories.

- First generation biotechnology involves the use of wild type or natural biological organisms to produce a product, for example, the use of yeast to make beer or wine.
- Second generation biotechnology refers to the production of specific products using a pure cell or tissue culture of organisms that have been specifically selected, through random cross-breeding or similar techniques, for their superior production or expression abilities without introducing foreign DNA.
- Third generation biotechnology involves manipulation of the genetic make-up of organisms, by introducing selected foreign (across the species barrier) DNA, through recombinant DNA technology, to make them produce small molecules, compounds or proteins.
- Support services for biotechnology include those activities that do not directly make use of biotechnology activities but provide essential support to those groups that do, e.g. legal services, business and financial support, equipment or reagent supplies etc.

Please complete all questions as accurately as possible.

Please report all expenditure items in the questionnaire exclusive of Value Added Tax (VAT). Where stipulated, please provide figures for the financial year 1 March 2002-28 February 2003.

Where exact figures are not available, please provide carefully considered estimates.

Please mark all appropriate boxes with a tick or x.

For questionnaires that are sent electronically, please use the “Track Changes” option when completing the questionnaires (See Tools/Track Changes).

Part A: Organizational/Individual Contact Information

Contact Details

1.) Name of Organization/Institution:

2.) Name of Research Stakeholder:

3.) Department:

4.) Unit:

5.) Designation and Rating (e.g. NRF Rating or Specific Titles):

6.) Telephone: () _____

7.) Fax: () _____

8.) Cell:

9.) Email:

10.) Postal Address: _____

11.) Street Address: _____

12.) Web Address:

13.) General Email Address:

14.) Other Relevant Persons:

Part B: General Research Group Information

Employees

15.) Approximately how many employees are there in your research group?

1-10

11-20

21-50

51-100

>100

16.) Approximately how many of the employees in your research group are involved in biotechnology-related activities?

1-10

11-20

21-50

51-100

>100

17.) What percentage of these employees fall into each of the following categories?

Research

Admin

Technical Assistance

18.) What are the approximate demographic profiles of these employees?

% Black

% Coloured

% Asian

% Caucasian

19.) What qualifications do these employees have?

% None

% Matric

% Diploma

% Degree

% Masters

% PhD

20.) List the main occupational categories where shortages are/have been experienced by yourself, e.g. scientists, engineers, accountants etc.

Part C: Biotechnology-Related Research

21.) Does your research group carry out any biotechnology-related R&D? If yes, please answer questions 22-24; if no; please go on to question number **25**

22.) Is all of the R&D carried out in-house or is some of it outsourced?

23.) If some of the R&D is outsourced, please indicate whether your R&D partner is

In South Africa

Abroad*

A HEI/RO

A Business Entity

HEI/RO = Higher Education Institute/Research Organization

* Which countries?

24.) Please list the biotechnology-related research projects in which your research group is currently involved (Please add columns as required)

Project Title	Consortium Members and their Organizations*	Year Initiated	Years to Market	Funding Received to Date, Amount & Source†	No. Employees on Project, Qualifications, and % Time spent on Project‡	No. and Status of Patents Filed**	Number of Publications	Expected Output (Products and Services)

* Please indicate the lead scientist with an asterisk

† Please indicate whether the funding is from: Internal Resources (IR), Local Businesses (LB), Foreign Businesses (FB), Local Venture Capital Firms (LVC), Foreign Venture Capital Firms (FVC), Government Incentive and Support Programmes (GIS), Other Government Funds (GF), HE Institutions (HEI), Science Councils (SC), Donations (D), Private Persons (PP) etc.

‡ For example: 3 PhDs @ 50%; 2 MScs @ 30 and 100%, etc.

** For example: 3 Provisional SA, 2 PCT, 1 USA awarded, etc.

Part D: Business Activities and Product Information

25.) Please describe any biotechnology-related products and/or services currently offered by your research group, the type of biotechnology activities used to generate the product or service, and the approximate gross revenues from each product or service, rounded to the nearest R5000, for the financial year March 2002 - February 2003. Services may include DNA sequencing, diagnostics, contract research etc. (Please add more columns as required). If your research group does not offer any products or services please continue on to question number 32.

Biotechnology Products and Services Offered	Type of Biotechnology*	Gross Revenues (Rands)

* 1st, 2nd, or 3rd generation or support services (See definitions in introduction)

26.) In what sector(s) are these products and/or services applied? (Please tick more than one box if appropriate)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Human Health Animal Health Plant Biotech Industrial Environmental Food/Beverage Support Services Other*

* Please explain

27.) Where are your major customers? (Please list the countries, including South Africa)

28.) What is your research group's primary competitive advantage in relation to competitors? (Please tick one box only)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Quality Novelty Price Service

29.) What was the approximate turnover of your research group for the financial year March 2002 - February 2003 attributed to biotechnology products and services?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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R0 <R50 000 R51-500 000 R0,5-1 million R1-5 million R5-10 million >R10 million

30.) Approximately what percentage of this turnover can be attributed to sales to customers outside of South Africa?

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<10	10-20	20-40	40-60	60-80	80-100

31.) What was the approximate expenditure of your research group on biotechnology-related activities for the financial year March 2002 - February 2003?

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
R0	<R50 000	R51-500 000	R0,5-1 million	R1-5 million	R5-10 million	>R10 million

Part E: Intellectual Property

32.) Excluding those counted in the table of projects above and those already granted, how many patents relating to biotechnology has your research group applied for?

Of these applications, how many were filed as provisional South African applications, how many were filed as PCT applications, and how many were filed as both?

<input type="text"/>	<input type="text"/>	<input type="text"/>
Provisional SA	PCT	Both

33.) Excluding those counted in the table of projects above, how many patents relating to biotechnology has your research group been awarded?

Of these, how many were awarded in South Africa, how many were awarded internationally and how many were awarded both in South Africa and abroad?

<input type="text"/>	<input type="text"/>	<input type="text"/>
South African	International	Both

34.) Excluding those counted in the table above, how many publications relating to biotechnology does your research group hold, i.e. from previous research projects?

35.) Has your research group used any other methods to protect its IP to date (e.g. trade marks, brands, trade secrets etc.)? Please elaborate.

Part G: Additional Information

37.) Does your research group have any foreign partners? If yes, who are they and what is the nature of the relationship (e.g. R&D collaborations, marketing arrangements, technical agreements etc.)?

38.) Do you have associations or collaborations with any other South African entities? If yes, who are they and what is the nature of the relationship (e.g. R&D collaborations, marketing arrangements, technical agreements etc.)?

39.) What factors are affecting the growth and general operation of your research group, including hurdles and bottlenecks? (e.g. financing, market penetration, human resources, business support etc.)

40.) Does your research group require or make use of any of the following support services? Please indicate your approximate expenditure on these services for the financial year March 2002 – February 2003

Support Service	Currently Use	Amount Spent on Support Service	Require but not Available	Will Require Within the Next 5 Years
Business Planning				
Project Management				
Strategic Management				
Fund Raising				
Financial Management				
Marketing				
Legal Services				
IP Management				

41.) Please provide any additional comments on information you have supplied in this questionnaire, queries raised during completion of the questionnaire, or any suggested improvements to the questionnaire.

42.) Do you know of anyone else we should be talking to?

Thank you for your participation!