



LIFE*lab*
ECoBio Innovation Centre

An initiative of:



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

Introduction of **LIFE***lab*'s Activities to COFISA



Vision

To be the leader in creating innovative biotechnology products and services in Human Health and Bioprocessing in the East Coast Region, and South Africa at large

Mission

To develop and grow the biotechnology industry in South Africa by funding innovative projects, developing technologies, building human capacity and creating technical platforms.



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LIFE*lab*'s Technology Platforms



National Genomics Platform

- Established in 2007: Open access, non-profit costing
- GS-FLX high-throughput sequencing (100MB/run)
- High-throughput real-time PCR
- Dedicated specialist staff
- Situated in Durban



Dr James Sakwa
Platform Manager



Dr Dawn Stevens
Research Scientist



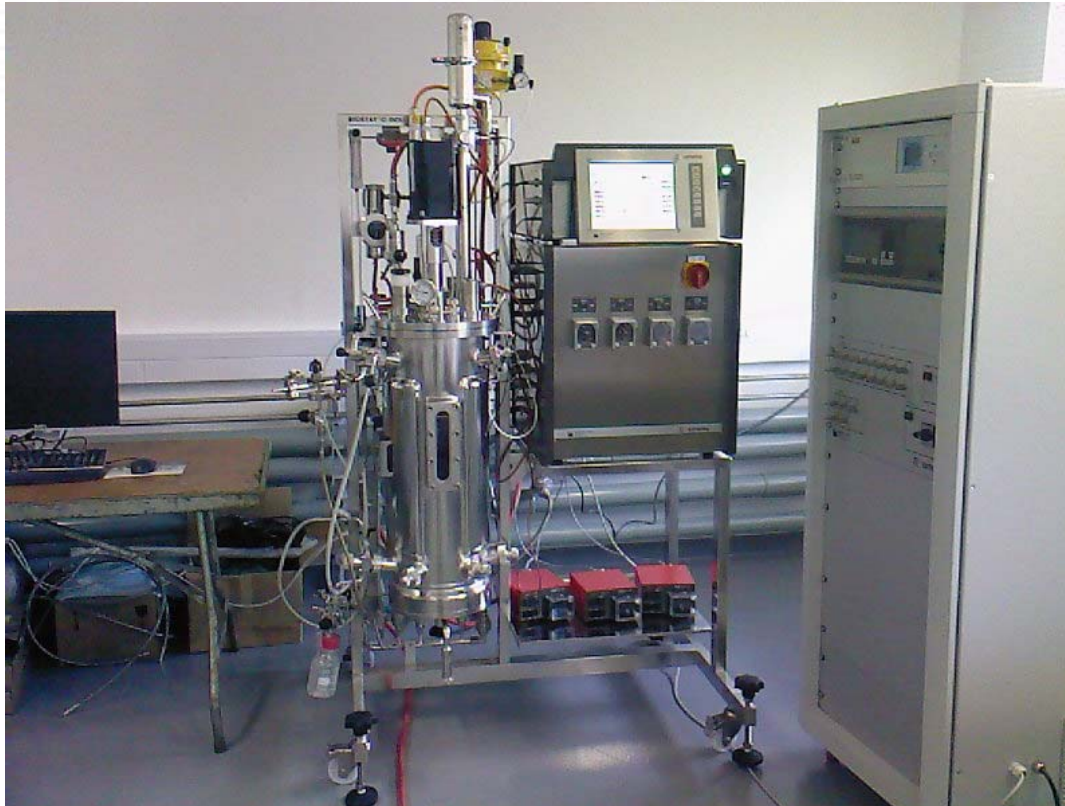
Ms Mmule Makgamathe
Research Scientist



LIFElab Bioprocessing Platform

- 4 fermentation suites containing 5 litre & 20 litre bioreactors including data acquisition and analytical systems
- Fully equipped laboratories
- Office space and admin support
- Seed money available for entrepreneurs operating in platform
- Situated at Umbogintwini, South of Durban





Contact:
Miss Thobile Dladla
Platform Manager

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Tel: 031 904 9763



Institute for Diagnostics Research

- Non-profit research institute for development & optimisation of rapid diagnostics
- Collaborate with any organisations seeking to produce antibody/antigen based diagnostics
- Contacts:
MD: Dr Lungile Shoba-Zikhali
(lungile.shoba@lifelab.org.za)

Containment Level P3 Platform for TB and HIV Research

- National platform for *in vivo* and *in vitro* TB and HIV research
- To be housed within US\$ 50million HHMRI at UKZN
- Located close to National Genomics Platform
- Operational in 2010





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LIFE*lab*'s Human Health Projects



African Clinical Research Organisation ACRO (www.acro.co.za)

- ACRO is a full-service, BEE, clinical research organisation managing phase I-IV clinical trials.
- JV between LIFElab & Batswadi Pharmaceuticals
- Competitive costing to locally-owned biotech companies
- Collaborates with SA universities & researchers
- Contact: mary-ann.richardson@acro.co.za
– Tel: 011 267 2250



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East Coast Rapid Diagnostics

- ISO-compliant manufacture of rapid diagnostics kits
- Initial product range: HIV, Malaria, Syphilis, Hepatitis B&C, pregnancy.
- Also includes a rapid urine diagnostics range
- Manufacturing plant to be completed by end April 2008
- Situated at Umbogintwini, south of Durban

- **CAPRISA: Phase II microbicide trial**

Phase II Trial to assess the safety & effectiveness of the vaginal microbicide, Tenofivir Gel for the prevention of HIV infection in young women in South Africa.

Contact: Prof. Quarraisha Abdool Karim
Abdoolq2@ukzn.ac.za

- **HIV Drug Resistance Diagnostic**

WITS, NHLS, NICD, CAPRISA project aiming to develop high-throughput DNA based diagnostics of HIV drug resistance

iThemba Pharmaceuticals

- Drug discovery company situated on CSIR campus in Modderfontein
- JV between LIFElab, BioPAD, US & UK scientists, Emory
- Initial focus on TB and HIV drugs
- Technology licensed from Emory University, US
- Currently recruiting medicinal chemists

- Contact: Dr Rebanta Bandyopadhyay, CSO
– rbandyop@ithembapharma.com

- **Elevation Biotech** www.elevationbiotech.com

Biotech company spun-out from WITS & NHLS: Aims to provide proof of concept and pre-clinical development of peptides HIV entry inhibitors.

Contact: Mr Grant Napier, MD
grant.napier@elevationbiotech.com

- **ARVIR Technologies** www.arvir.co.za

HIV drug development and process development company. Spun-out from CSIR

Contact: Dr Dave Walwyn, CEO
dwalwyn@arvir.co.za



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LIFE*lab*'s Bioprocessing Projects





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LIFElab's Bioprocessing Projects

Company	Project Title	Value	Output
Biological Control Products	Fermentation Process Development	~200K	Competitive products for agricultural pathogens
African Yeast	Fermentation Validation study for Bakers Yeast	~300K	Technology due diligence completed
Enzyme Technology	Process Development for Enzyme Manufacture	~500K	Process data for enzyme production process
Lifelab (internal project)	Citrus Oil Recovery	~50K	Novel method for efficient citrus oil recovery
Bioreactor Engineering CC (entrepreneur)	Entrepreneurial Training	~50K	Launch of a new company



LIFElab Capacity Development Programme

- Bursaries: Honours, MSc and PhD
- Postdocs: Genomics, Clinical research, Diagnostics, Bioprocessing
- Internships: few weeks up to 1 year, postgraduate internships in platforms

Opportunities for interaction with COFISA

- Exposure of SA biotech companies to European markets
- Strategic alliances and collaborations
- Capacity development (work-placed exchanges)
- Tech-transfer agreements

