



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



sa sme
FUND

Contact: Ms Tandokazi Nquma Moyo
E-mail: Tandokazi.Nquma@tia.org.za
Contact: 012 472 2793

Press release

The Technology Innovation Agency (TIA) and The SA SME Fund's University Technology Fund (UTF) invests in blockbuster Covid-19 testing interventions

Pretoria, 28 July 2020

In bringing technological interventions to curb the Covid-19 pandemic, the UTF, a TIA-SA SME Fund co-investment sub fund under TIA's Industry Matching Fund Programme, has invested in 2 blockbuster innovations amounting to R13 million in value.

Hyrax Biosciences

One of the companies that benefits from the UTF is Hyrax Biosciences. This a spin off company from a previously disadvantaged university (University of the Western Cape). Hyrax Biosciences is a South African company known for its contributions to the HIV drug resistance testing. They have, however, utilised their Exatype platform to support the analysis of SARS-CoV-2 (the causative virus of COVID-19). Exatype is a clinical-grade, disease-agnostic DNA analysis platform that enables the rollout of fully automated genetic diagnostics at scale. This SARS-CoV-2 solution enables end-users to easily analyse SARS-CoV-2 sequence data at scale, with great accuracy and reduces the "hands on time" of analysis from days to hours.

The company is undergoing scientific validation and commercial contracting with a number of international companies for the use of the Exatype platform as part of complete sample to report solutions for SARS-CoV-2 diagnostics. The revenue from their SARS-CoV-2 product would result in an inflow of foreign currency to South Africa and as well as the recruitment of some new personnel at the company.

Cape Bio Pharms

The second beneficiary of the UTF is Cape Bio Pharms with a collective investment of R4.2 million together with the University of Cape Town. Cape Bio Pharms has commercialised the technology that enables the production of a wide range of recombinant proteins to be expressed in a distant cousin of the tobacco plant – *Nicotiana Benthamiana* – not a plant one can smoke. Essentially each plant becomes a tiny bio-reactor. Their focus is on research re-agents and diagnostic

proteins for Life Scientists around the world. Reagents are the most critical of proteins as they are workhorses of new drug discoveries.

Cape Bio Pharms responded very quickly to the SARS-CoV-2 outbreak by securing the genetic sequences to the Spike Protein in February 2020. They have successfully created four variants of the antigen using their plant-based expression technology

The advantages of plant based expression platform include the following:

- The production facility has been built at a 10th of the cost of traditional systems such as mammalian cell culture systems.
- Scale-up is rapid as they simply add more plants
- High flexibility as the platform allows quick conversion to producing other proteins
- Speed to market as any protein of interest can be ready, post infiltration, within three weeks,
- Plants are very good at producing complex molecular structures or fusion proteins on their own.
- Ethical choice - no animals are used in the making of recombinant proteins
- Safety as there is no risk of the transfer of animal pathogens as in traditional systems – particularly for proteins used in vaccines or for therapeutic applications

The Cape Bio Pharms Spike Protein collection is currently in the final stages of testing and approval by local and international test kit manufacturers and industry bodies. Cape Bio Pharms has already significantly increased the local plant production under a new subsidiary, Cape Biologix Technologies, to be able to produce enough protein for the manufacture of 40 million test kits a month by December 2020

The vision behind the establishment of the company is to eventually build a plant-based cGMP compliant facility to ensure security of supply of critical pharmaceutical proteins for Africa.

Ms Tandokazi Nquma-Moyo, Acting Executive Manager Strategic Relations and Corporate Relations, says, “The revenue from their SARS-CoV-2 products will allow the companies to create additional jobs, as well as an inflow of foreign currency to South Africa.”

Wayne Stocks, a partner at Stocks and Strauss Fund Manager, fund manager of the UTF, says, “Both of these businesses highlight the significant world-class biomedical skills located in our universities, and these investments will allow these institutions to commercialise and scale up their IP. The investment, industry introductions, and guidance from TIA and the SA SME Fund have allowed us, as fund managers, to focus on backing globally relevant technology and teams.”

END

About the Technology Innovation Agency

The Technology Innovation Agency is an agency of the Department of Science and Innovation mandated to support the state in stimulating and intensifying technology innovation across all sectors of the economy in order to deliver socio-economic benefits for South Africa and enhance its global competitiveness. These goals are achieved by supporting the development and commercialisation of research outputs from higher education institutions, science councils, public entities, private research institutions and enterprises and bringing them to market. TIA uses South

Africa's science and technology base to develop new industries, create sustainable jobs and help diversify the economy. Therefore, the mission of TIA is to exploit South Africa's knowledge resources into sustainable socio-economic opportunities.

About the University Technology Fund

The University Technology Fund is a university IP commercialisation fund, that works to invest in and commercialise valuable South African IP originating from universities. The UTF is the first of its kind in South Africa and is based on best practice from Oxford and Cambridge universities , tailored to the South African context.

About the SA SME Fund

The SA SME Fund, www.sasmefund.co.za, is a private sector led initiative born out of the 'CEO Initiative', a partnership between the SA Government and CEOs to stimulate the economy and create jobs. The shareholders of the Fund are 50 of South Africa's largest corporates and the Public Investment Corporation. The Fund has R1.2 billion of investable capital, which it invests via partnerships with fund managers. The primary focus areas are venture capital and growth capital.
