PRESS RELEASE

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**TIA SUPPORTS NEW DIAGNOSTIC TECHNOLOGY TO RAPIDLY DETECT FOOT AND MOUTH DISEASE**

The Technology Innovation Agency (TIA), an entity of the Department of Science and Innovation (DSI) is funding a Gauteng based start-up, that is developing a diagnostic test kit for early detection of foot and mouth disease (FMD) in livestock traditionally kept in remote and rural areas.

Developed by TokaBio (Pty) Ltd, the Point-of-Care technology empowers livestock farmers to make informed decisions regarding their livestock’s disease status, thus help reduce the spread of FMD in the most efficient way possible.

This 4IR-enabled technology facilitates a quick turnaround time for tests results, enabling farmers to rapidly isolate diseased animals. Normally, it would take a week or two to receive results from laboratories.

The results are made available in just an hour on a mobile device which is also connected to the government regulators’ database providing live information of the disease status of livestock, adding value to the governments’ livestock disease surveillance programme. This strengthens South Africa’s position in terms of beef export operations while also responding to the needs of the domestic livestock market.

FMD is a devastating livestock disease, affecting significant herd numbers. The best response, once there is an outbreak, is to isolate diseased livestock from non-affected livestock to decrease the spread. The disease affects hooved animals such as cattle, pigs, sheep and goats, and in the wild, impala and buffalo. Beyond the farm, FMD has a negative effect on the export market of beef and beef by-products.

Due to strict disease control monitoring systems implemented by markets like the USA and Europe, South Africa, Namibia and Botswana are at present, the only countries in Africa that are able to export their cattle to these markets and therefore command better prices for the livestock sold.

Outside South Africa, the technology has been tested in Rwanda, Lesotho and Zambia – where outbreaks were reported recently. Its implementation will enhance these countries’ ability to export livestock as well as contributing to their livestock surveillance programmes.

The technology is funded through TIA’s Agriculture business unit which supported technology development and pre-commercialisation. The unit supports the creation of start-ups/innovators/enterprises and an enabling environment for agricultural technology innovation.

Furthermore, it supports the development and demonstration of agricultural technology innovations and facilitates commercialisation of de-risked technologies thus improving the diffusion of appropriate agricultural technologies to small-scale and emerging farmers for the benefit of the agricultural sector.

“TIA is excited to be part of this development, which demonstrates the impact and reach of technological innovations to the places where they are needed and the impact that can be realised, even in marginalised and rural areas,” said head of the unit, Sibusiso Manana.

“This is directly linked to our objective of contributing towards increased productivity in food security, and promoting rural economic development, by driving innovation and technology investment in bio-innovative technologies, products, processes, and services to enable a growing, vibrant and economically sustainable agricultural sector,” Manana added.

The initial technology was developed by another DSI entity, the Council for Scientific and Industrial Research (CSIR). TokaBio further developed the technology for commercialisation

“Africa remains the battle ground for contagious, infectious animal disease diagnosis. TokaBio is determined to win the battle towards full identification of these diseases, irrespective of the environment or socio-economic status of the livestock owners,” said Dr Phiyani Lebea, Managing Director, TokaBio (Pty) Ltd.

Senior Researcher at the CSIR, Dr Essa Suleman, said the Veterinary Molecular Diagnostics and Vaccines Programme at the CSIR had strong expertise and a variety of technologies aimed at improving the livestock and agricultural sectors.

“This can be done through the development of cutting-edge diagnostic technologies that can be deployed at point of care and plant produced vaccines to reduce the burden of diseases such as FMD, brucellosis, bovine tuberculosis, African Horse Sickness (AHSV). This diagnostic technology is an excellent example of technologies that will improve livestock production and access to lucrative export markets,” said Dr Suleman.

**Additional developments by TokaBio (Pty) Ltd**

TokaBio has setup mobile COVID-19 detection sites in Midrand and to demonstrate its agility additional sites have been set up at Beitbridge and Lebombo border posts, to assist South Africa to test for COVID-19 at these border posts. This capability to test for COVID-19 is based on the similar PCR technology that has received regulatory approval from South African Health Products Regulatory Authority (SAHPRA). Concurrently, the same point- of- care technology described above is being validated for COVID-19 testing suitability and registration with SAHPRA. and has received regulatory approval from South African Health Products Regulatory Authority. Through the pivoting of the point- of- care technology South Africa has been able to increase its COVID-19 surveillance towards minimising the spread of COVID-19.

Ends.

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**About TIA**

The Technology Innovation Agency (TIA) is a public entity in South Africa that serves as the key institutional intervention to bridge the innovation chasm (gap) between research and development from higher education institutions, science councils, public entities, and private sector, and commercialisation (beneficiation). TIA was established in 2010 and has a national reach with offices in KwaZulu Natal, Western Cape and Gauteng. The main thrust of the mandate of TIA is funding and supporting innovative technologies that show potential to be commercialised. The organisation also has programmes that provide non-financial support to innovators and SMMEs. Lastly, TIA is a catalyst and enabler of innovation through various partnership initiatives locally, in the African continent and globally.

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