



**SCIENCE, TECHNOLOGY, AND INNOVATION-OFFICE OF THE  
PRESIDENT**

**15<sup>th</sup> FEBRUARY 2022**

**STATEMENT BY**

**HON. DR MONICA MUSENERO MASANZA**

For Immediate Release

Kampala 15<sup>th</sup> February: Our attention is drawn to an article in The Observer Newspaper Publication of February 10<sup>th</sup> 2022 titled 'Ugandan scientists duped Museveni on Covid-19 vaccine - former minister'.

In a statement before a Parliament Select Committee that was set up to interrogate utilisation of funds meant to facilitate the Covid-19 vaccine development, Dr Elioda Tumwesigye said the President was duped and given false hopes on the capacity and capabilities of Uganda Scientists to produce Covid 19 Vaccines.

Science, Technology, and Innovation- Office of the President alongside the team of imminent Ugandan Scientist find these comments attributed to Dr Tumwesigye very unfortunate and aimed at discrediting the excellent work which our scientists have undertaken through very difficult times to put our nation on better footing to protect her people against infectious diseases as well as open up an industrial value chain that will greatly contribute to the social economic transformation of our country as well as open up jobs for many young Ugandans.

In FY2020/21 PRESIDE funded 23 Projects, out of these projects, 4 were for vaccines. Our scientists have made tremendous progress over the past few months even amid delays in procurement and funding.

A handwritten signature in blue ink, appearing to be 'M. Masanza'.





## **Status of Vaccine Development:**

### **1. NAV COV-19 vaccine:**

#### **Study Progress:**

We have developed the NAV COV-19 vaccine.

- Specifically, we have generated a key component using the Ugandan chimpanzee viruses from Ngamba Island, Uganda Wildlife Education Centre and the forest reserve in Hoima. We are in the process of patenting this product. It is broad based, owned by Ugandans and will be critical in developing COVID-19 vaccines and vaccines for other infectious/dangerous pathogens. A key advantage here, like the developed countries, for the next variants of concern or pandemics we can quickly (less than a year) make our own vaccines.
- We have also generated three candidate vaccine molecules for the Local Uganda variant of concern A23.1, Delta and Omicron. The next step is bulky production of these molecules, cleaning or purification followed by preclinical animal studies in mice.

#### **Original work-plan**

- The initial plan was to conclude this work during the first quarter of 2022, however due to delays relating to procurement of key reagents and the delayed Financial release for FY 2021/22, we are still optimistic to complete the preclinical phase within this financial year.

### **2. UGREC19:**

#### **Achievements to-date**

A handwritten signature in blue ink, consisting of a stylized 'A' followed by a flourish.

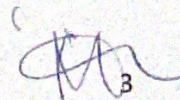




- a) We have set up a pipeline to produce the candidate vaccine on experimental levels
- b) Produced the candidate vaccine at low scale to facilitate pre-clinical studies in laboratory animals (mice)
- c) Preclinical studies in ordinary mice (to determine if the vaccine is safe and immunogenic) have been completed and in final stages of data analysis
- d) The candidate vaccine has been shown to be safe and to elicit a strong immune response
- e) The next stage is to test if this safe and immunogenic vaccine also protects mice against COVID-19 disease (efficacy studies)
- f) The locally available mice that we have used to test vaccine safety and immunogenicity cannot be used to test if the vaccine is protective, because mice are naturally not susceptible to COVID-19. A suitable mouse model required to study if the vaccine protects from disease (humanised mice that were engineered to become COVID-19 susceptible) are expected into the country by end of February 2022. These are to be supplied as 2 breeding pairs that will be locally bred and multiplied (under license) to produce numbers we need for the efficacy testing. This multiplication will take at least 3 months, followed by another 2 months of testing the vaccine in this special mouse model.

This stage was severely delayed because the mutant mice required have to be imported. The first company identified to supply turned us down after 6 months. They returned the funds and we engaged another one in the US. Presently the mutant mice have been prepared for us and ready for shipment. The source company is arranging that with available couriers.

- g) Having satisfied that the vaccine protects mice from disease, it will be ready to be produced at standards required to take it into phase I clinical trials where its safety in humans will be investigated. This production is done under international standards, the so-called Good Manufacturing Practices (GMP) and normally at industrial scale. PRESIDE and STI-PO

  
3





are engaging with industrialists that will partner to provide infrastructure and expertise to produce vaccine suitable for human use.

The Ministry would like to assure all Ugandans that we are on track to develop a home-grown vaccine that will be effective in the protection of us without subject us to inhumane discrimination that characterised the distribution of vaccines to Africa at the height of the Covid-19 pandemic.

Our scientists have demonstrated high levels of integrity and commitment to the vision of our President and this Government and no amount of distraction will deter them from our mission to make Uganda vaccine independent.

### **3. UG-INA-19**

We have collected patient swabs and used these to isolate COVID-19 viruses circulating in our population. Specific emphasis has been placed on the Delta, Beta and Omicron strains that are known to be more resistant to protective antibodies. These viruses have been isolated and expanded to prepare bulk stocks. The stocks have been inactivated and are currently undergoing purification to remove chemicals before they are tested in pre-clinical animal trials.

- Ends -

**For Further Information Contact:**  
Dr. David Sseruka

A handwritten signature in blue ink, appearing to be 'DAVID S'.





Email: davidserukka@gmail.com  
Tel: 0772-628-393

### **Editor's Note:**

#### **About the Vaccine Program**

##### **Why Vaccines**

Vaccines are the most cost effective way to protect the population against infectious diseases. Vaccination is a simple, safe, and effective way of protecting people against harmful diseases, before they come into contact with them. They prevent up to 3 million deaths worldwide every year. A **Vaccine** stimulates the body's immune response against diseases.

##### **The Status of R&D of Vaccines in Africa**

Before COVID-19, Africa did not have any capacity for the entire vaccine manufacturing value chain and contributed only 1% as fill & finish by a few entities in Northern and Western Africa.

A handwritten signature in blue ink, appearing to be 'DAVID SERUKKA'.





**~1.3 billion doses of vaccines  
are used annually**

**Africa represents ~25%  
of global demand**

In 2021, the vaccine industry is estimated to be worth \$74.2bn.

At the advent of COVID -19 and once there was enough understanding that vaccines were going to play a key role in controlling the pandemic, it also became apparent that African countries were going to struggle to access vaccines. There has been concerted international efforts, to enable hereto non vaccine research and producing countries to build capacity for local vaccine R&D and production. Promoting and stimulating local production is a topic that has over the last 2 years received political commitment from the African heads of states including Uganda.

#### **The Ugandan Efforts**

Uganda has been battling the COVID-19 pandemic since March 2020. In April 2020, MoSTI put out a public call for COVID-19

A handwritten signature in blue ink, possibly reading 'A. M. 6'.





R&D projects and out of over 300 proposals submitted, there were no projects submitted for COVID-19 vaccine and other high technology innovations. This prompted His Excellency to come up with a special initiative.

As part of the strategic interventions, His Excellency the President, directed the Prime Minister Rt.Hon. Ruhakana Rugunda to set up the **Presidential Scientific Initiative on Epidemics (PRESIDE)** aimed at fast-tracking local research and development to generate tools to enable the country cope with the current and future health security needs. The platform was designed to complement and enhance this arm of scientific research and development that focuses on Vaccines, Diagnostics and Therapeutics. Vaccine work was new and required special support to start it through a novel approach that would engage the scientists.

PRESIDE operates as a thinktank supported by a secretariat.

Uganda is resident to both endemic and epidemic pathogens which impact on the country and the region, such as Ebola, Marburg, Zika and many other emerging ones which can be a problem to the rest of the world. As early as the 1937s, more than 10 viruses had already been recorded as having their origin in Uganda.

As of January 2022, Uganda has vaccinated approximately 15million, first dose 13million, second dose 2million and Booster 14,265 people. We will need to at least vaccinate over 70% of our population with the COVID-19 vaccine.

The local vaccine R&D capacity that we are currently building will not only help us reach this target for COVID-19 vaccination but also for other diseases that require vaccines.

Creating and managing sustainable local manufacturing value chain for medical products including vaccines is a persistent challenge for many countries in Africa. The disruption in accessing health services caused by the COVID-19 pandemic

7





highlighted the need to foster and manage local R&D and innovation efforts, establish sustainable local manufacturing, and to build domestic capacity whilst harnessing global cooperation to strengthen health systems.

PRESIDE has supported the scientists working on the vaccine projects in various. Beyond financial support, PRESIDE is ensuring that there is national and international coordination of the local vaccine R&D process. One primary way is through the efficient and proactive management of the knowledge flows generated from the interaction and collaboration between various actors involved in this value creation process. Proper coordination of stakeholders is key in vaccine manufacturing and proper management mechanisms for sustainability of local manufacturing efforts is paramount.

Therefore, PRESIDE is using a comprehensive strategy that includes institutional mechanisms such as oversight committees which are key in creating an enabling an environment that stimulates creativity, spurs knowledge use and nurtures local manufacturing activities for sustainable impact.

PRESIDE as a coordinating platform has exemplified ways of bringing together diverse stakeholders to identify solutions to common problems to achieve common goals.

Our scientists are receiving support and guidance from National regulators such as Uganda National Council of Science & Technology (UNCST), National Drug Authority and international support from World Health Organization (WHO), other vaccine researchers and manufacturers.

Beyond just vaccines, PRESIDE is coordinating R&D in Diagnostics, Therapeutics and Support Facilities such as a Lab Animal House. For Diagnostics, we have 2 projects that have produced test kits that are ready for commercialization and for Therapeutics, we have concluded the first ever internationally recognized clinical trial in a local herb UBV 10N. We await the results of this clinical trial.

A handwritten signature in blue ink, appearing to be 'AA'.





The value chain approach has helped us identify a localization strategy for inputs needed to develop our local biologics. This will help nation to fully harness the Pathogen Economy.

Pathogens are microorganisms that cause disease.

Pathogen Economy refers to monetary value generated from manipulating pathogens. Products such as vaccines and medicines are part of the pathogen economy.

Our scientists, when called upon by His Excellency during the COVID-19 Pandemic took a courageous step of working towards the self-sustenance of our nation to respond to epidemics. They need our support for our nation to achieve this.

A handwritten signature in black ink, appearing to be 'A. A.', located in the bottom right corner of the page.