

R3.5m grant for Pan-African vaccine development

The Chemical Industries Education and Training Authority (CHIETA) has invested R3.5m into several locally made candidate vaccines, including one for Covid-19, and in research and skills transfer at Walter Sisulu University (WSU) and North-West University (NWU),



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Prof Markus Depfenhart, who has been involved at both institutions in the development of vaccines and pandemic management interventions in Africa, will head up the project.

Local vaccine development

“Vaccine development is a scarce skill on the African continent,” says CHIETA CEO, Yershen Pillay.

“At the same time, locally made vaccines give us the best chance of improving our pandemic management. Only by starting with local vaccine design and formulation – created to suit our local conditions – will SA and the African continent end up manufacturing on the continent and have security of supply in times of pandemic.”

Pillay adds that a local vaccine may hold considerable commercial and social impact value.

“The grant aims to develop significant local skills and could lead to local manufacturing, expansion, distribution and/or

supply.

“Just as with SARS, MERS and H1N1 ‘swine flu’ viruses, Covid-19 was not the first virus to disrupt our world in this lifetime – and it won’t be the last.

“Bolstering our local competency in the fields of vaccine development and pandemic management will surely pay off in the long run.

“It is crucial to invest in these skills now, even though it may seem at times that the pandemic is slowing down,” says Pillay.

Establishing a strong network

A Memorandum of Agreement (MoA) has been signed between WSU and CHIETA to conduct pre-clinical trials to test the efficacy of candidate Covid-19 vaccines which have already been developed.

Amongst these candidate vaccines is a Covid-19 candidate which Depfenhart has developed on a DNA platform, which holds promise in several aspects.

"The collaboration is not only about the fact that we are looking at the Covid-19 pandemic, but we're also looking at other viruses that are challenging us on the African continent such as Malaria. Covid-19 is however one of the first virus' that we will be engaging with," says WSU Vice-Chancellor, Prof Rushiella Nolundi Songca.

Pan-African collaboration platform

Added to the MoA is the aim to develop a Pan-African network of collaborating universities and research institutions who want to play a key role in vaccines and pandemic management on the continent.

The universities have also since established the Sisulu Foundation for African and Pandemic Disease Response (Sisulu Foundation) as a Pan-African collaboration platform.

The Sisulu Foundation is in discussion with executives from the World Health Organisation (WHO) and scientists from various countries including Kenya, Senegal, Gabon, Uganda, Botswana, Germany, and Slovenia.

The intention is to pursue several joint projects within the broader consortium – although this is not currently included under the original R3.5m grant.

“Through this MoA, CHIETA has become a critical enabler to a very unique and ambitious project, which develops critical skills locally, and initiates Pan-African collaboration amongst scientists on the continent and internationally.

"We are proud to be part of this initiative and hope to have a positive influence on establishing the local value chain for vaccine production," adds Pillay.

The parties have a common desire to pursue three imperatives: academic, commercial and social justice imperatives. The arrangements around the IP rights, from which the WSU and NWU may commercially benefit, are currently being finalised.