



SAMRC awarded a multi-million rand grant

**R867
MILLION**

Awarded by USAID. This is the largest ever grant received by an African organisation and will go a long way in efforts to obtain an effective vaccine against HIV.

from **USAID** to develop and test novel HIV vaccines in Africa.

The SAMRC with partners in South Africa and seven other African countries have come together to form a collaboration called the BRILLIANT (BRinging Innovation to cLinical and Laboratory research to end HIV In Africa through New vaccine Technology) consortium.

The consortium were recently awarded more than US \$45 million (approx. R867 million) by the U.S. Agency for International Development (USAID) to implement a programme called "HIV Vaccine Innovation, Science, and Technology Acceleration in Africa (HIV-VISTA). This is the largest ever grant received by an African organisation and will go a long way in efforts to obtain an effective vaccine against HIV, which continues to impact the lives of countless individuals and communities in South Africa.

Photo above: SAMRC President and CEO Prof Glenda Gray with Paloma Adams-Allen (Deputy Administrator of USAID) and Reuben Brigety (United States Ambassador to South Africa)

THANK YOU, Professor Gray



Prof Glenda Gray

On behalf of the Board, Senior Executive team, and the entire SAMRC community, collective appreciation is extended to Professor Glenda Gray for her diligent service to the organisation.

Professor Gray, who has served as the President and CEO of the South African Medical Research Council (SAMRC) for the past 10 years, has announced her intention to assume a different role within the organisation and expressed her desire to transition into a full-time science role in 2024 when her term as the President and CEO of SAMRC comes to an end.

Throughout her leadership at the SAMRC, Professor Gray, alongside an exceptional Senior Executive team, has achieved significant milestones including five consecutive clean audits, transformative grant funding initiatives that have greatly improved support for young scientists, black African scientists, and women, as well as the establishment of vital collaborations and partnerships that will advance scientific research.



I reassure my unwavering commitment to the SAMRC and the medical research community. I look forward in hope, to a healthier future and towards a world free from the burden of HIV. I'd also like to express my deep gratitude and sincere thanks for the opportunity to lead this amazing organisation and serve the country and scientific community with pride and respect.

– Prof Glenda Gray

Key findings from 20 years of strategic HIV and public health data

The results from the Sixth South African National HIV Prevalence, Incidence, and Behaviour survey (SABSSM VI) are available, which highlight progress toward ending HIV in South Africa – the country with the world's largest HIV epidemic.

The study was led by the Human Sciences Research Council (HSRC) in collaboration and partnership with the South African Medical Research Council, Centers for Disease Control and Prevention, NICD, University of Cape Town, South African National Aids Council, and UNAIDS and was funded by the US President's Emergency Plan for AIDS Relief (PEPFAR).

With the survey collecting data on key indicators, results were presented on the HIV annual incidence, prevalence and viral load suppression. Also highlighted was the achievement of the



95-95-95 targets set out by the South African National Strategic Plan for HIV, TB and STI's.

SABSSM VI found that the percentage of all people living with HIV in South Africa has

Key Findings of the Sixth South African National HIV, Prevalence, Incidence and Behaviour Survey, (SABSSM VI): 20 years of strategic HIV and public health data

27 November 2023 from 11:00 to 12:00



decreased from 14.0% in 2017 to 12.7% in 2022. This translates to approximately 7.8 million people living with HIV in South Africa in 2022 compared to 7.9 million in 2017.

Creating Heat-Safe Schools in response to Climate Change



As climate change continues to unfold, rising heat, longer summers and increasing heatwaves are of growing concern in South Africa.

We have to adapt in order to protect vulnerable groups such as children, the elderly and pregnant women against the health effects of heat exposure.

Under our Socio-Economic Development (SED) initiative, the SAMRC has stepped up to provide sustainable measures for creating Heat-Safe Schools. Recently, the SAMRC launched the project at one of the participating schools in Limpopo, in the presence of the school's employees, its governing body and some very excited learners.

Schools were provided with options to keep children cool in hot weather, these included

DID YOU KNOW?

Heat exposure can affect our health in several ways:

- When the body becomes too hot, a person may experience heat cramps, heat exhaustion and even heat stroke, which is regarded as a medical emergency.
- Also being highly irritated, having difficulty in concentrating, headaches and loss of ability to do tasks or heavy work.
- It can also affect the teacher's ability to teach, and of children to learn.

TIPS TO STAY COOL!

- Drink plenty of water on hot days to stay hydrated.
- Protect yourself and children from the sun by wearing sunscreen or sitting in the shade.

installing ceilings, ceiling fans, blinds, the construction of awnings to provide shade during school breaks and foot-operated water fountains closer to where children need them.

The school's Principal said, "Reitumetse thatha - We are extremely happy. We appreciate the work done, which has made a big difference in our school. Re leboga gagolo SAMRC! - Thank you very much SAMRC."

ANTIMICROBIAL RESISTANCE AND US

Microbes are everywhere, these include viruses, bacteria, and fungi. Naturally, they are in our bodies, such as on our skin, upper respiratory track, and intestines.

Microbes are also in the environment, in our drink and our food. When conditions are right, some microbes cause disease in humans and animals. Medicines that kill or inactivate microbes are called antimicrobials - these can be antivirals (against viruses), antibiotics (against bacteria), and antimycotic or antifungals (against fungi).

The SAMRC-UNIVEN Antimicrobial Resistance and Global Health Unit, under the direction of Prof Pascal Bessong is working with communities for a better understanding of the acquisition, diversity, burden, and transmission dynamics of bacterial antimicrobial resistance in our communities. It is the hope of the Unit that evidence garnered will strengthen the chance of success of intervention strategies in mitigating antimicrobial resistance from the strategic approach of community engagement, involvement, and mobilisation.

DID YOU KNOW?

A situation whereby a microbe survives or thrives in the presence of a medicine that previously kills the microbe is called antimicrobial resistance. There are several reasons why microbes develop resistance to medicines. One reason could be that a strain of the microbe that is naturally resistant multiplies and becomes the majority strain. Another reason is when, over time, a microbe develops ways to survive the medicine against it.

Antimicrobials have played and continue to play a major role in the promotion of global health, socio-economic development, and advancement of nations and civilization. The discovery of penicillin against bacterial infections, and antiretrovirals against HIV are examples of how antimicrobials saved lives. It takes many years and a lot of resources to develop an antimicrobial; so, it is a concern when an antimicrobial begins to lose its effectiveness because of resistance development. The World Health Assembly described efforts to reduce antimicrobial resistance as a global problem. This is because antimicrobial resistance leads to sickness and death from previously treatable infectious diseases.



Unlocking Population

Health Insights:

The South African Population Research Infrastructure Network



A remarkable initiative is quietly transforming the way we understand population health and well-being in communities across the country.

The South African Population Research Infrastructure Network (SAPRIN) is a groundbreaking initiative with a vision to improve public health by gathering critical data, facilitating research, and creating positive impacts in local communities. SAPRIN is funded by the Department of Science and Innovation (DSI) and hosted by the SAMRC.

of the most comprehensive population health research networks in the country.

The network's operations are strategically distributed across six research nodes, three of which are situated in urban areas, and three in rural regions. They enable the exploration of various factors, such as health disparities, migration patterns, mortality and morbidity trends, and access to healthcare services within these diverse communities.

SAPRIN's extensive reach spans the entire South African landscape, positioning it as one

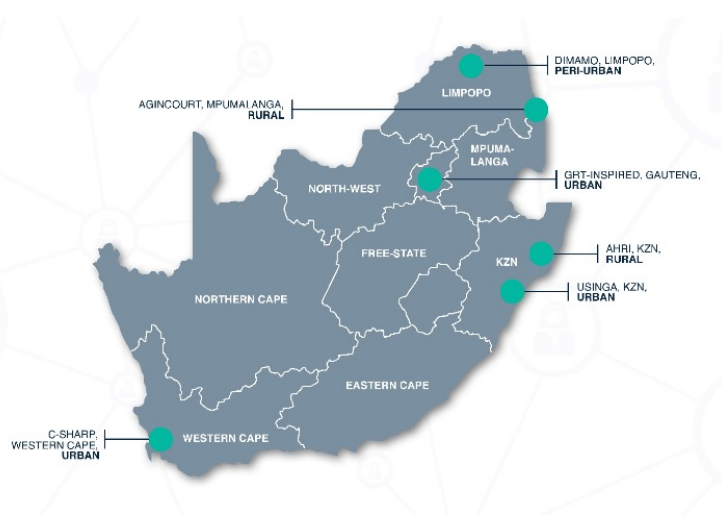
Impacting Communities: A Closer Look

Through its collaborations with healthcare providers, SAPRIN helps identify gaps in healthcare access and service delivery.

encourages healthy behaviours, and fosters a sense of ownership over public health initiatives. SAPRIN aims to transform health outcomes and strengthen the well-being of all who live in South Africa, one community at a time.

SAPRIN's commitment to community engagement ensures that residents have a say in the decisions that affect their health. This approach empowers communities to take charge of their well-being,

Visit the SAPRIN website at www.Saprin.mrc.ac.za to find out more



Building capacity for the next generation of health scientists

Over the years the SAMRC's Division of Research Capacity Development (RCD) has provided funding for over 400 early to mid-career researchers and postgraduate students, mainly PhDs at universities and research institutions with a particular focus on historically disadvantaged individuals as well as institutions previously constrained by inadequate access to resources.



The funding includes research grants for researchers, fellowships for postdoctoral fellows, scholarships for PhD and Master's students, and staff development grants for academic staff members to attain their PhD's. This remains a top priority towards strengthening capacity development with the aim to attain health research transformation and equity. RCD also manages funding on

behalf of the National Department of Health, National Health Research Committee, and 22 private companies, through a vehicle called the joint Public Health Enhancement fund (PHEF) to fund the scholarships in the Bongani Mayosi National Health Scholars Programme. For funding opportunities please visit: <https://www.samrc.ac.za/funding/request-for-applications>

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The Chan Soon-Shiong Family

Foundation and SAMRC team up

to build capacity in the biopharmaceutical manufacturing industry



The Chan Soon-Shiong Family Foundation (CSSFF) and the SAMRC are collaborating on several capacity development programmes which have been made possible by a generous donation from the CSSFF and contributions from the SAMRC.

The CSSFF-SAMRC capacity development programme seeks to support an area of need in Africa – aiming to grow the next generation of biopharmaceutical manufacturing professionals, researchers, and technical experts needed to establish an industry in (South) Africa and on the continent.

The man behind the award, Dr Patrick Soon-Shiong saw the need to invest in the programme

stating "There is a critical need for Africa to manufacture drug substance vaccine product. This will require a concerted training programme to build a workforce capable of fulfilling all aspects of the manufacturing value chain. We are delighted to be playing our part and offer young scientists opportunities to be part of this".

Dr Richard Gordon – Director for International Business Development, said that the global pandemic highlighted issues around global supply of vaccines, drugs and medical devices etc, which were deeply felt in Africa, especially around vaccines. "It was clear that we needed to build the vaccine manufacturing industry in Africa, and a key part of doing this is to build a workforce ecosystem."

To date, this programme has included awards for young scientists allowing them to complete 2 biomanufacturing training internships as well as a range of awards for Masters and Doctoral projects. The selected candidates being those

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– Dr Richard Gordon

who have graduated with a degree in health sciences, life sciences, chemistry, chemical engineering, pharmacy and allied science degrees that are relevant for the health and biotechnology sector.

The lab-based training programme covered both laboratory and soft skills required in biopharmaceutical manufacturing and will extend through to key processes involved in up- and down-stream biopharmaceutical manufacturing. By using the expertise of the SAMRC in the fields of molecular biology and biochemistry, the programme aims to take young scientists from academia and get them into industry. Thus far, 2 cohorts of the Studentship Programme have received their certificate after completing the introductory training course in biopharmaceutical manufacturing.

Building a healthy nation through research translation

Research Translation (RT) is an important strategic goal of the SAMRC. RT involves a set of activities and processes to move ideas or recommendations that come from research studies into policies and healthcare practice.



It is about making new knowledge gained through research accessible, understandable, and usable for health decision-making, so that valuable insights and discoveries from research have a meaningful impact on people's health and society.

WHY IS RESEARCH TRANSLATION IMPORTANT?

RT plays a crucial role in bridging the gap between research and real-world issues. It can help inform and improve decision-making, promote a better understanding of what research is and how it can address health issues. It can also guide the allocation of resources by identifying strategies that have the greatest impact on health outcomes. Additionally, RT can help reduce waste by ensuring that research is put to good use, and promote collaboration between different health decision-makers, and it can ensure that research is making a difference in communities and is continuously being improved.

The Global Evidence - Local Adaptation (GELA) project, which is part of the EDCTP2 programme, is situated within the Health Systems Research Unit at the SAMRC, includes a well-considered RT approach. The GELA project aims to support decision-makers in making guideline recommendations for newborn and young child health in Malawi, Nigeria and South Africa.

For more information on the GELA project and its research translation approach, please contact Prof Tamara Kredo and Dr Bey Schmidt – Health Systems Research Unit.

Taking good care of your oral hygiene to protect your health



It is quite normal to have bacteria in your mouth but having the presence of harmful bacteria have been linked to a host of health problems.

Medical scientist Prof Glenda Davison and microbiologist Dr Yvonne Prince from the SAMRC / Cape Peninsula University of Technology's Cardiometabolic Health Research Unit explains why it's so important to practise good oral hygiene.

DID YOU KNOW THAT POOR ORAL HEALTH CAN LEAD TO SERIOUS DISEASES?

More than 700 species of microorganisms reside in the mouth. New technologies, such as 16S rRNA analysis, have allowed researchers to study their genetic makeup and family trees. These microbes are found all over the mouth: in and around the teeth, the gums, tongue, palate and saliva. They usually remain stable during our lifetime but if the balance in the bacterial community is disrupted, harmful bacteria may become dominant. This can lead to bleeding gums and oral diseases such as gingivitis and periodontitis. Also, abnormal bacterial communities in the oral cavity have been linked to serious health conditions like liver disease, renal failure, cancers, heart disease and hypertension as well as illnesses as diverse as autoimmunity, obesity and even Alzheimer's.

High levels of stress and lack of exercise have also been linked to disruptions in the balance of the oral biota. A well-balanced diet with enough rest, accompanied by good dental hygiene is recommended. It is important to remember that the mouth is the door to the gut and the rest of the body. By keeping the microbes that live there in harmony is important to reduce the risk of disease.

What can you do to protect your health?

- Be sure to brush and floss teeth regularly to prevent the build-up of plaque.
- To support the balance of the bacteria in the mouth, it is recommended that foods rich in antioxidants, like fresh fruit and vegetables. This also means avoiding foods high in sugar, which can lead to tooth decay and cavities.
- Practice good dental hygiene by having regular dental check-ups.
- Dentists also recommend avoiding the use of antibacterial mouth washes, which can disrupt the balance of microbes.

DIABETES AND YOUR EYES

DID YOU KNOW?

It is important to have a retinal examination once a year if you have diabetes. This is because diabetic retinopathy is often symptomless. You might not realise that you have the condition until it progresses, and your vision becomes irreversibly damaged.

To limit your risk of diabetic retinopathy and disease progression, it is vital to control blood glucose levels and manage high blood pressure and cholesterol with the help of an appropriate medical professional.

Where can you get a retinal examination?

A dilated eye examination can be performed by an ophthalmologist. This is done by inserting drops into your eyes to dilate your pupils, after which your ophthalmologist will assess your eyes for signs of diabetes complications and other diseases. Alternatively, you can make an appointment for a diabetic retinal screening with your optometrist or appropriate medical professional or ask your community clinic for information on where to access this service. After a retinal screening, a referral for a dilated eye examination or treatment will be made if needed.

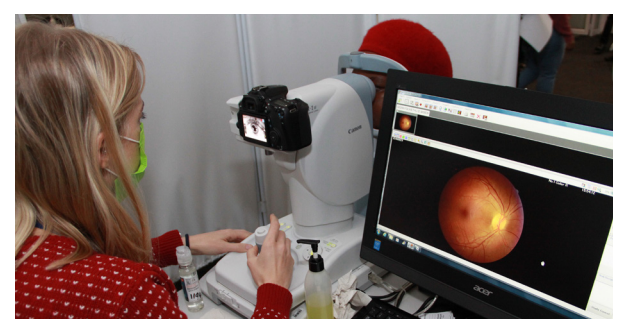


South Africa has a high and rising prevalence of type 2 diabetes mellitus among adults, with the illness being poorly managed.

When blood glucose levels are not well controlled, complications affecting various organs are likely to arise. These complications include diabetic eye disease, of which diabetic retinopathy is the most common and a major cause of blindness in working-age adults. Other diabetic eye complications include cataracts, swollen optic discs, glaucoma, and ocular surface diseases.

Diabetic retinopathy is a progressive complication of diabetes (both type 1 and type 2) that presents when small blood vessels in the retina of the eye are damaged by consistently high glucose levels in the blood.

Research conducted by the SAMRC's Non-Communicable Diseases Research Unit and the SAMRC/CPUT Cardiometabolic Health Research Unit, in collaboration with national and international institutions, aim to expand the understanding of diabetic retinopathy, its prevalence, and the associated risk factors in an African and South African context.



Advanced stages of diabetic retinopathy are likely to cause symptoms such as vision loss, which can become irreversible, and require urgent intervention such as laser treatments, injections, or eye surgery.

The risk factors of diabetic retinopathy are:

- Poor glucose control and disease duration
- High blood pressure and high cholesterol levels
- Pregnancy
- Smoking

GloPID-R Africa Hub Launch

The GloPID-R Africa Hub was officially launched during a conference in Cape Town, hosted by the SAMRC. The hybrid event was attended by scientists, policy makers and public health experts from across the globe. It was organised by the SAMRC through its Cochrane South Africa intramural unit and the GloPID-R Africa Hub Secretariat. The launch featured an impressive line-up of internationally renowned speakers, including leading scientists from SAMRC, participants from Africa and beyond took part in roundtable discussions and break-out sessions.



MASTRU team members who represented SAMRC.

Global Alcohol Policy Conference 2023

The Global Alcohol Policy Conference 2023 was hosted by the Mental Health, Alcohol, Substance Use and Tobacco Research Unit (MASTRU) at the Cape Town International Convention Centre. #GAPC2023 allowed for conversations that sought to explore and seek solutions on interrelated harms of alcohol use.

11th SA AIDS Conference

The 11th SA AIDS Conference took place at the Durban International Convention Centre under the theme of Act, Connect and End the Epidemic. As a key stakeholder in the fight against HIV/AIDS, the SAMRC was well represented at this three-day conference, calling for action and reigniting the fight against HIV/AIDS.



PHASA2023 conference

The PHASA2023 conference was held in Gqeberha this year with the theme: 'Transforming research translation- reimagining public health, evidence, policies, and practice. The conference provided an opportune setting for engaging with the most recent public health research and evidence, for rethinking current models of research translation, identifying barriers and opportunities for change.



Dr Tracy Appollis, Senior Scientist at the SAMRC Health Systems Research Unit who presented her work at the conference said: "Such inspiring research is being done in South Africa. Its always so exciting to be among all the health professionals in the public health stream and to learn about what everyone is doing to better the health of all South Africans."

Launch of National Science Week 2023



The SAMRC was one of the exhibitors at the launch of the National Science Week in Thohoyandou, Limpopo. The aim of the event was to share the work done by the SAMRC with the young and inquisitive minds who attended, which included high school students and teachers as well as university students. A key message shared was how through science we can save lives.



World Diabetes Day Awareness 2023

Research Scientists from the Biomedical Research and Innovation Platform visited a senior centre based in Langa, Cape Town. The scientists spent time with the elderly discussing #DiabetesAwareness and responding to their questions on how to manage their health.

Diabetes Awareness

Walk



In observance of World Diabetes Day 2023, the SAMRC community were out and about for a family and friends fun walk at Jack Muller Park to raise awareness about Diabetes. Our experts were on hand to engage the public

on issues around this illness and share information on how you can take charge of your health and steps to be taken to prevent this disease.

ABOUT THE SAMRC

The SAMRC is dedicated to improving the health of South Africans. Established in 1969, the organisation, has for the past five decades been at the forefront of responsive research, medical innovations and transformative science – the organisation conducts and funds health research, health innovation, development and research translation.

Visit our website www.samrc.ac.za or contact us at info@mrc.ac.za

