



ARTIFICIAL INTELLIGENCE IN MEDICAL AND HEALTH RESEARCH

SUMMATIVE REPORT 2025/2026



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



A NOTE FROM THE PRESIDENT AND CEO

The 2025/2026 financial year has reinforced a defining shift in how we pursue our mandate as the SAMRC, with the visible increasing integration of artificial intelligence (AI) and advanced technologies into the fabric of health research.

**PROFESSOR
NTOBEKO NTUSI**



As an organisation tasked with generating evidence to address South Africa's quadruple burden of disease, maternal, newborn and child health, HIV and tuberculosis, non-communicable diseases, and interpersonal violence, we are continuously refining how we produce knowledge that is both responsive and actionable.

Our theme for the 2025/2026 Annual Report is "Artificial Intelligence in medical and health research" to highlight that AI is fast becoming a core pillar of future health innovation in South Africa and abroad. Across the SAMRC's research units and centres, we are leveraging data-driven tools to strengthen disease surveillance, improve predictive modelling, and accelerate the translation of research into policy-relevant insights. From epidemiological modelling within our HIV and TB research platforms to data analytics supporting non-communicable disease studies and digital tools enhancing violence and injury surveillance, these advancements are expanding our ability to interrogate complex health challenges with greater precision and speed. Importantly, the adoption of AI enhances our capacity; it does not replace the foundational role of human expertise. Scientific inquiry remains inherently human: it is driven by critical thinking, ethical judgement, and contextual understanding.

AI augments this process by enabling researchers to work more efficiently with large, complex datasets, identify patterns that might otherwise remain hidden, and generate insights that inform targeted interventions. However, it is our researchers, their experience, discipline, and commitment to public health, who ensure that these tools are applied meaningfully and ethically within the South African context, and this expertise ultimately extends more broadly within the region and abroad. Within the SAMRC, several research units are advancing the application of AI and digital innovation to directly support our mandate. Our burden of disease research continues to evolve through improved data integration and modelling techniques, strengthening national health planning. Units focused on genomics and infectious diseases are exploring computational approaches to understand disease transmission and treatment responses better. Similarly, our work in

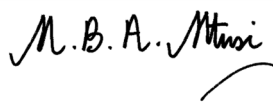
mental health and violence prevention is increasingly supported by digital data systems that allow for more timely and nuanced insights into risk and resilience.

The broader landscape of health research in South Africa reflects a growing recognition of the role of AI and technology in growing scientific capability. As a country, we are uniquely positioned to harness these tools in ways that address local realities, high disease burdens, and resource constraints, while also dealing with the challenges of equitable access to healthcare. This requires not only investment in technology but also in skills development, data governance, and ethical frameworks that safeguard public trust.

As we look ahead, the SAMRC remains committed to integrating innovation with purpose. Our focus is not on research for its own sake, but on its ability to advance health outcomes, inform policy, and ultimately improve the lives of the people we serve. I am satisfied with our performance during this reporting period as we reached the targets we set

for ourselves and approved by the Board and the National Department of Health.

In conclusion, I would like to extend my sincere appreciation to the entire SAMRC team, the executives, and the previous Board under the leadership of Professor Johnny Mahlangu for their support and guidance. In the same breath, I would like to welcome our new Board led by Professor Tyrone Pretorius. I also wish to thank the Minister of Health, Dr Aaron Motsoaledi, Deputy Minister of Health, Dr Joe Phaahla, and management at the National Department of Health for their leadership and guidance.



Professor Ntobeko Ntusi

SAMRC President and Chief Executive Officer



PROJECTS HIGHLIGHTS AND ACHIEVEMENTS

Internal Response to US funding withdrawal

In 2025, the South African Medical Research Council (SAMRC) faced significant pressure on HIV and TB research following reductions in United States (US) federal funding, which had traditionally supported a substantial portion of the country's HIV and TB research portfolio. In response to the significant disruption of the South African research landscape caused by the withdrawal of US federal funding, the SAMRC through various mechanisms, proactively intervened to protect the nation's scientific progress by cushioning the impact of these sudden financial losses.

- › Within the intramural research programme, to mitigate disruption and protect critical programmes, the SAMRC adopted a combination of stabilization measures, strategic reprioritisation, and system integration. Hardest hit were programmes focused on HIV, TB and diversity-focused research; however, these rapidly pivoted to other research areas such as Mpox or cholera, considered new and diverse funding streams and consolidated staff and infrastructure.
- › Our BRILLIANT programme of HIV vaccine research, terminated by USAID very early in January 2025, has continued, albeit in a more condensed programme, with new committed funders. As a first and immediate response, the ELMA Relief Foundation committed R3 million to support the BRILLIANT pre-clinical HIV programme, thereby ensuring the continuity of this component. Staff who were appointed on terminated programmes were consulted at every new development to mitigate workforce losses as much as possible and ensure that critical expertise was retained within the organisation. As one way to support research during these uncertain times, the SAMRC reaffirmed its commitment to strengthening South Africa's research system by providing targeted support to the Extramural Research Units (EMUs). This strategic intervention provided critical interim financial support through once-off grants for postgraduate students (MSc and PhD) whose studies were directly affected, alongside providing Equipment and Maintenance Support to ensure that essential research equipment remained functional.

Through these interventions, SAMRC contributed as a stabilising force during this difficult period as well as aided to preserve research momentum and ensured the continuity of high-quality health research within the SAMRC intramural and extramural research environment. The experience also accelerated a shift toward greater sustainability, integration, and national alignment of health research, which may, in the end, see 2025 as the year of a shift to more resilient, flexible, and independent research in Africa.

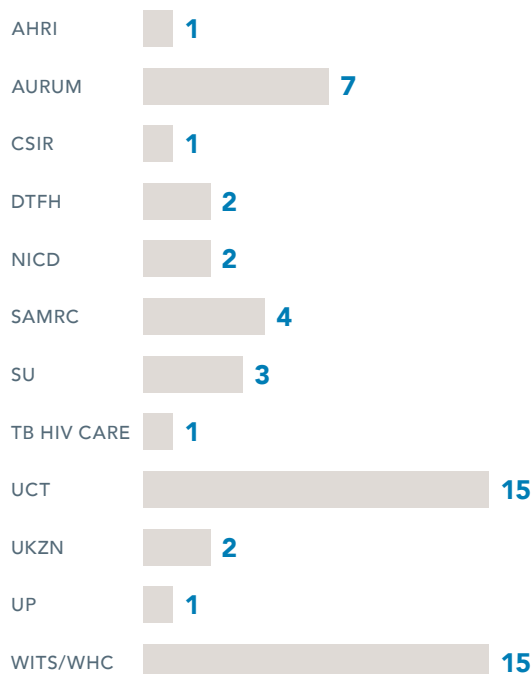
External Response to US funding withdrawal

- › The SAMRC, through the office of the President and the Grants, Innovation and Product Development (GIPD) unit, also mounted a broader, nationwide response to the funding crisis by establishing the National Health Research Enterprise (NHRE) Programme. The SAMRC President, with support from the National Department of Health, spearheaded efforts to raise funding to support affected institutions and organisations, ensuring a strategic, locally driven response to safeguard South Africa's national health research enterprise from severe attrition.
- › In April 2025, a formal proposal titled "*Proposal for Support of South African National Health Research Enterprise in Response to U.S. Funding Withdrawal*" was submitted to the National Department of Health, National Treasury and Department of Science, Technology and Innovation (DSTI) urgently requesting a commitment from government to the value of R400 million with the promise of co-founding support from the Gates Foundation and the Wellcome Trust.
- › In June 2025, a letter of response was received from the Finance Minister, Mr. Enoch Godongwana, addressed to the Minister of Health, Dr Aaron Motsoaledi, outlining support to allocate a total of R400 million over 3 years to the SAMRC, with R132 million of this allocation for immediate release under the Section 16 Emergency Allocation. This was followed by finalisation of commitments of R100 million each from Gates and Wellcome Trust and a further commitment from the ELMA Foundation of R14.4 million to co-fund projects with particular emphasis on maternal and child health.

- › In July 2025, SAMRC issued a Request for Applications (SAMRC-RFAGIPD- 04-2025), inviting eligible institutions and researchers affected by the situation to apply for funding. The NHRE RFA focused on research in infectious diseases, including HIV and tuberculosis, non-communicable diseases, maternal and child health, and other areas that are part of South Africa's national health priorities. The programme's main objectives were to sustain and ensure the continuation of important research activities; provide temporary support to research groups as they seek alternative funding; support early- and mid-career scientists; enable postgraduate students and postdoctoral fellows to complete their training; support the ethical closure of interventional studies through appropriate participant follow-up; and maintain vital health research infrastructure. In total, 102 applications were received from the first RFA, of which 87 were approved for funding; 28 were subsequently withdrawn due to the reinstatement of their grants. A total of 54 grant awards were made, totaling approximately R208 million.
- › Following several partial reinstatements of US funded projects, the SAMRC launched a second RFA, in December 2025. A total of 24 applications were received, with an additional 10 proposals approved for funding. Overall, 64 projects will benefit from this funding, with an approximate total of R248 million awarded.
- › Interim programme impact Although still early in implementation, the NHRE programme has been highly successful in meeting its core objectives of salvaging research, human resources, and infrastructure aligned with South Africa's national health priorities. Funded projects cover a broad range of thematic areas, including HIV (40%), tuberculosis (30%), newborn and child health (11%), non-communicable diseases (8%), other infectious diseases and other thematic areas (11%).
- › The NHRE investment also extended to essential research infrastructure, including data management systems, Information and Communication Technology platforms, biobanks, clinical trial units, core facilities, and general maintenance. While some projects have received partial reinstatement or alternative funding, the majority continue to rely on NHRE support, underscoring the programme's critical role in sustaining South Africa's health research ecosystem during the funding disruption and transition period.

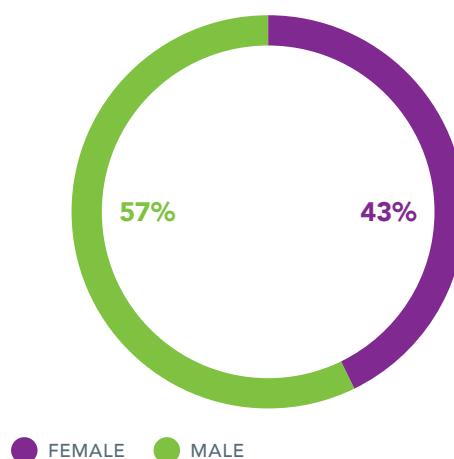
PORTFOLIO BY INSTITUTION

Distribution of the NHRE programme portfolio by institution



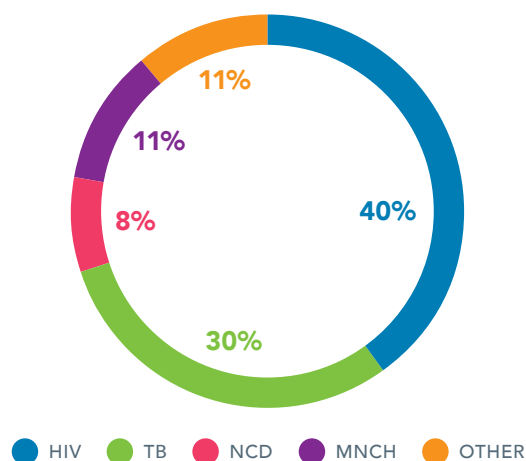
PORTFOLIO BY GENDER

Distribution of the NHRE programme portfolio by gender



PORTFOLIO BY THEMATIC AREA

Distribution of the NHRE programme portfolio by thematic area



Recognising that the US funding crisis is not over, the SAMRC is embarking on creating a flagship programme to reshape support to the South African National Health Research Enterprise in the absence of large-scale US funding as well as budget cuts from other national funders. With continued support from the South African Government for at least the next 2 years and further leveraged funding we will be launching new initiatives in 2026 to ensure that the NHRE sustains and endures.

ORGANISATIONAL HIGHLIGHTS AND ACHIEVEMENTS

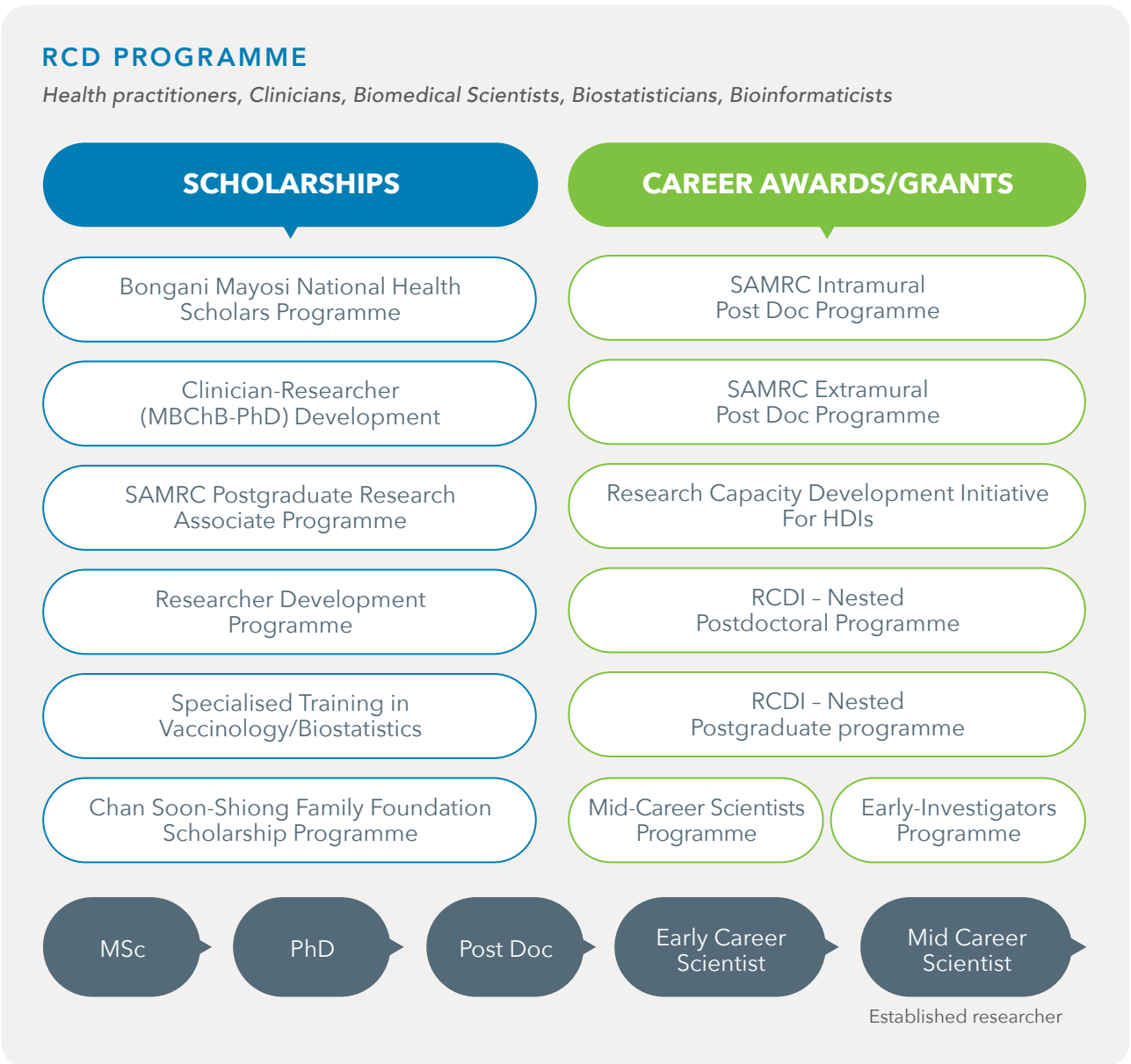
- › Through diligent governance and legible administrative systems SAMRC celebrates its eleventh clean audit by SA Auditor General.
- › Total number of students involved in funded projects increased to 209, compared to 186 in 2024/25, 67% of these were female.
- › During the reporting period, SAMRC Research Capacity Development funding initiatives supported beneficiaries who received top honors at prestigious awards, such as South African Women in Science Awards (SAWISA), U.S. National Academy of Kinesiology (NAK), National Science and Technology Forum (NSTF) Clinician Scientist Award, as well as L'Oréal–UNESCO For Women in Science Award.
- › SAMRC launched the Strengthening Teamwork and Respect (STAR) programme which aims to develop a talent pool by equipping individuals with skills and knowledge necessary to meet the organisation's leadership needs. Participants are equipped with essential knowledge and insights to help them build their professional reputation and progress in their respective careers.
- › The SAMRC, through the office of the President and the Grants, Innovation and Product Development (GIPD) unit, mounted a broader, nationwide response to the funding crisis by establishing the National Health Research Enterprise (NHRE) Programme. The SAMRC President, with support from the National Department of Health, spearheaded efforts to raise funding to support affected institutions and organisations, ensuring a strategic, locally driven response to safeguard South Africa's national health research enterprise from severe attrition.

RESEARCH CAPACITY DEVELOPMENT

Overview

The primary aim of the SAMRC's Division of Research Capacity Development (RCD) is to promote the long-term sustainability of health research in South Africa by funding the next generation of health scientists. The division supports capacity building by offering scholarships, fellowships, and research grants or career awards to postgraduate students, postdoctoral fellows, and early- and mid-career scientists at South African universities. Since most

of these awards target individuals from historically disadvantaged backgrounds, the division's activities also significantly contribute to transformation in health research. In 2025/2026, RCD's programmes continued to support the SAMRC's strategic goals of managing health research effectively and efficiently, fostering the creation of new knowledge, and developing human capacity for the sustained growth of health research in South Africa. RCD's programmes are divided into Scholarships and Career Awards/Grants as depicted in the figure below.



The number of beneficiaries and the amount invested in 2025/2026 for each programme are listed in the Table below. The total number of funded beneficiaries (career awards/grants and

scholarships), including new intake for the 2025/2026 reporting period, exceeded the annual target of 110. The total performance for indicator 4.1.1 is 226.

SCHOLARSHIP PROGRAMME	NUMBER OF BENEFICIARIES	CATEGORY	AMOUNT AWARDED
SAMRC Researcher Development Grant	7	PhD	1,439,291.00
Bongani Mayosi-National Health Scholars Programme	8	PhD	1,544,401.90
Biostatistics Capacity Development Programme	17	MSc	3,643,000.00
SAMRC Clinician Researcher Development Programme	36	PhD	11,216,961.04
SAMRC Postgraduate Research Associate Programme (previously SAMRC Internship Scholarship Programme)	37	MSc and PhD	7,870,000.00
The Chan Soon-Shiong Family Foundation Scholarship Programme	18	MSc and PhD	6,657,075.00
CSSFF-SAMRC UWC MSc in Pharmacy Administration and policy regulation	4	MSc	390,000.00
PhD Nodal SAPRIN Fellowship	2	PhD	1,040,000.00
TOTAL SCHOLARSHIPS	129		33,800,728.94

CAREER AWARD/GRANT PROGRAMME	NUMBER OF BENEFICIARIES	CATEGORY	AMOUNT AWARDED
SAMRC Mid-Career Scientists	7	Scientists (PI)	10,500,000.00
Scientists	30	Scientists (PI)	6,580,600.00
Postdoctoral Fellows	3	Post-doctoral Fellows	1,050,000.00
PhD Students	15	PhD	2,280,000.00
RCDI – Nested Postgraduate Programme	15	Post-doctoral Fellows	5,250,000.00
SAMRC Intramural Post-doctoral Fellowship Programme	16	Post-doctoral Fellows	4,585,833.00
SAMRC Early Investigators Programme	11	Scientists (PI)	5,500,000.00
TOTAL CAREER AWARDS/GRANTS	97		35,746,433.00

FUNDING HEALTH INNOVATION THROUGH GRANTS INNOVATION AND PRODUCT DEVELOPMENT

The Grants Innovation and Product Development (GIPD) Unit of the SAMRC supports research and innovation through a number of grant programmes, strategic partnerships, strategic programmes, and innovation initiatives, as depicted in the Figure below, thereby contributing to two of the organisation's core functions and strategic objectives. These enable the SAMRC to support and build the health research and innovation ecosystem in South Africa, drive cutting-edge scientific advancement and facilitate the development and testing of novel health solutions.

The total expenditure on research and innovation grants during the 2025/2026 financial year was over R300 million. GIPD's rigorous grant management standard operating procedures ensure that health research funding is administered effectively and efficiently by SAMRC. Alongside consistent clean audits, these have helped attract significant funding from various local and international strategic partners. Additional substantial funding raised to support the National Health Research Enterprise (NHRE), to mitigate against US funding cuts and a renewed emphasis on innovation within the unit, has contributed to an expanded portfolio of research and innovation grants. This portfolio exceeded SAMRC's targets for indicators 2.3.1, 3.1.1, and 3.2.1 in 2025/2026.

GIPD Programmes and Strategic Projects during the reporting period

› In 2025, the DSTI facilitated the participation of the SAMRC as an implementing partner in the European Partnership on One Health Antimicrobial Resistance (OHAMR), committing up to R5 million per annum (through SHIP) to support the participation of South African PIs in consortia responding to RFAs released by the OHAMR partnership. The OHAMR brings together 53 organisations from 30 countries to address AMR across different sectors. The SAMRC's participation was approved by the NDoH, and South Africa is the only African country participating in this important global initiative. The partners developed a proposal and submitted it to the European Commission to request a top-up grant, which was approved in November 2024. The

first RFA, focusing on "Treatments and adherence to treatment protocols", was developed by the partners in 2025, announced during AMR Week in November 2025, and closed in February 2026. Ten projects, which include a South African applicant, were deemed eligible and are currently undergoing peer review. Successful projects from this stage will be invited to submit full proposals, and awards are expected to be made by the end of 2026.

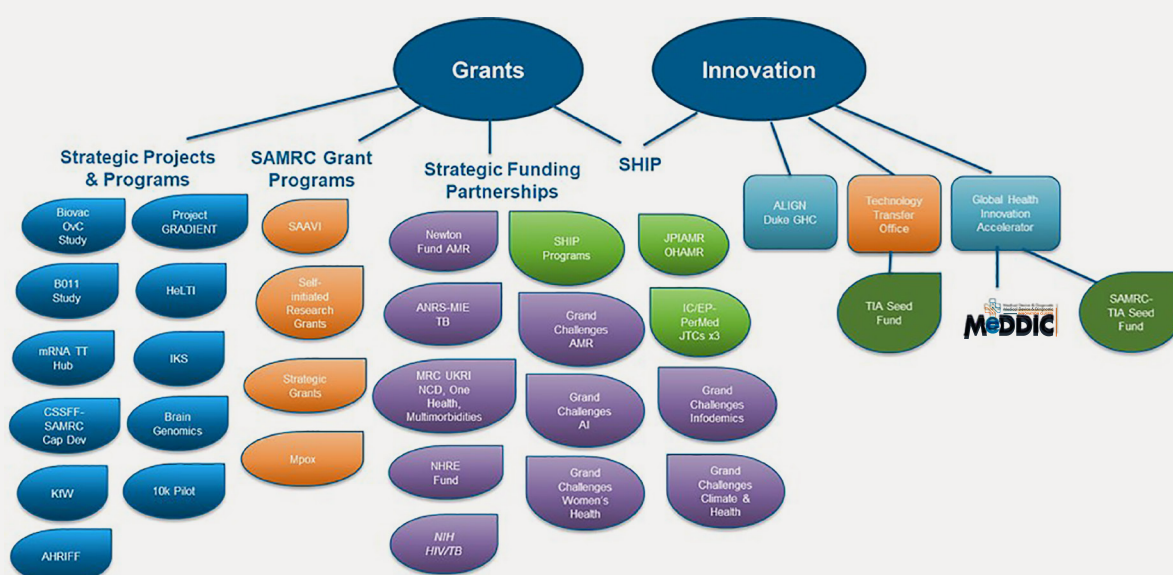
- › Strategic Health Innovation Partnerships (SHIP) SHIP is a major programme through which the SAMRC, in collaboration with the Department of Science, Technology and Innovation (DSTI), supports the development and testing of novel health solutions aimed at HIV, malaria, TB, non-communicable diseases (NCDs), antimicrobial resistance (AMR), maternal and child health (MCH), and emerging diseases such as COVID-19. A notable achievement in the financial year was the approval of the SHIP Business Plan for 2026–2032. This milestone will secure the future of this vital innovation initiative beyond 2025/2026.
- › Seven new projects were selected for funding through the SHIP HIV Request for Applications (RFA) released in 2025. One of the projects, led by Dr T Chetty from the SAMRC, which aims to determine the safety and pharmacokinetics of broadly neutralising antibodies administered to HIV-exposed neonates and infants born without HIV, has secured R8 million in co-funding from ELMA Philanthropies.
- › The late lead compound for TB developed by the UCT H3D team, led by Prof K Chibale, has secured support to be advanced towards preclinical candidate drug nomination under the European Regimen Accelerator for Tuberculosis (ERA4TB) in collaboration with the Gates Medical Research Institute (Gates MRI). This represents a significant milestone in the TB drug discovery efforts of South Africa. The H3D team has continued to provide support for drug discovery capacity building efforts at the University of Limpopo and University of Venda by providing in-house training opportunities and workshops to postgraduate students enrolled on SHIP-funded projects at these universities.

- › Results from a small field trial of the Sterile Insect Technique (SIT) against KwaZulu-Natal's main malaria mosquito (*Anopheles gambiae*) demonstrated that releasing sterile males reduced mosquito numbers by over 90% over 5 months. The biggest drop came within the first month – down more than 75% (from 175/month to 40.45). Numbers rose again about a month after releases stopped, reinforcing that the releases drove the decline. The project team is in advanced discussions to secure funding to scale up mosquito mass-rearing and conduct feasibility testing of X-ray sterilization (as an alternative to gamma irradiation) ahead of the next phase, which will assess the public health impact.
- › The HAMLET (Human African Molecular Placental Research Platform), hosted at UCT under Prof. M Matjila, has successfully established a continental placental research hub, trained early-career researchers, and developed a biobank of over 500 participants. As a result of SHIP's catalytic funding to initiate placental research, the team has

received requests and hosted researchers from other LMICs.

- › Core Needle Biopsies to Detect Hidden HIV Reservoirs in Hard-to-Reach Tissue Compartments of Deceased Virologically Suppressed and Unsuppressed HIV Positive Patients. One of the most significant roadblocks to an HIV cure is the ability of the virus to hide in the body. Even when treatment suppresses HIV in the blood, the virus might remain in hidden "reservoirs" and reappear once therapy is discontinued. This innovative project has seen researchers develop a comprehensive archive of blood and tissue samples from HIV patients. This one-of-a-kind database will enable scientists to map HIV's hiding places, track its evolution, and identify the exact cells that contain the virus. This project has the potential to lead to new biomarkers to track hidden HIV, deeper insights into viral persistence, and stronger foundations for designing targeted cure strategies.

OVERVIEW OF THE GRANT AND INNOVATION PROGRAMMES AND STRATEGIC PROJECTS MANAGED BY THE GRANTS INNOVATION AND PRODUCT DEVELOPMENT UNIT



REPORT OF THE CHIEF EXECUTIVE OFFICER AND PRESIDENT

General financial review

(All figures R'000, prior financial year in parenthesis.)

Actual Performance

Revenue for the year showed an increase of 13% to R1 591 560 (R1 408 845). This consists of an increase in government grants of 5.7% to R765 298 (R724 161) supported by an increase in contract income of 20.7% to R826 262 (R684 684).

Other income has increased by 15.4% to R30 913 (R26 792) due to increase in recoupment of research grants not fully spent.

Operating expenses reflected an increase of 11.1% to R1 589 019 (R1 430 555) due to an increase of 27.3% in collaborative research costs.

The preceding has resulted in an operating surplus of R33 454 (R5 083) for the year.

The organisation remains financially strong with accumulated reserves of R581 019 (R473 614).

Total assets have increased by 30% to R1 536 908 (R1 182 631) due mainly to an increase in cash and cash equivalents by R272 986 and an increase in Property, Plant and Equipment by R62 887 due to increased capital expenditure on buildings, computer equipment and the donation of laboratory equipment.

Deferred income has increased by 30.2% to R701 523 (R538 756) due to earning more contract funding in the reporting period.

SAMRC generated operating cashflow of R329 339 (R222 844) mainly due to an increase in cash generated from customers and grants which had increased by R186 000 whilst payments to suppliers only increased by R93 000.

Net cash flows from investing activities were negative representing cash outflow due mainly to capital expenditure of R51 940 (R60 193) of which about R48 000 was spent on information technology high-performance servers and high-capacity storage solutions.

The net impact of the above is an increase of R274 814 (R157 774) in cash and cash equivalents.

Budget vs Actual Performance

For the 2025/2026 financial year, SAMRC had budgeted for a nil surplus/deficit however during

the year an adjustment budget was submitted and approved by the National Minister of Health. The budget had to be adjusted for a surplus of R32 669 due to anticipated capital equipment donations and the subsequent accounting treatment of such entries.

Actual Revenue of R1 695 217 was under budget by R634 495 (27.2%) against a budget of R2 329 712. This was mainly due to lower than anticipated contract revenue (sale of goods and services). The underperformance in revenue was matched by underperformance in expenditure of R1 591 088 resulting in an underspend of R705 954 (with 94% being Contracts R660 749) against an expenditure budget of R2 297 043.

The nett result of the budget to actual is a surplus of R71 459 against a budget of R32 669 which agrees to the actual surplus of R104 128.

Requests to retain cash reserves

The organisation remains financially strong with accumulated surplus reserves of R581 019 (R473 614). The necessary approvals will be sought from National Treasury for permission to retain the surplus of R104 128 as required by the Public Finance Management Act (PFMA).

Supply chain management

There was no unsolicited bid proposals received during the financial year. The revised Materiality Framework was approved by the National Minister of Health.

Audit report matters

There were no matters to report.

Events after the reporting date

No significant events were identified after the reporting date that may have an impact on the financial statements.

Economic viability

Funding allocations of R902 835 for 2026/27 have been approved by National Treasury. This together with accumulated reserves of R581 019 and the increase anticipated in the value of grants received will ensure that the SAMRC will continue to operate as a going concern.



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