ANNUAL REPORT
2023-2024

30 YEARS
OF DEMOCRACY AND HEALTH RESEARCH TRANSFORMATION IN SOUTH AFRICA

SISONKE, TOGETHER, SAVING LIVES

30 YEARS OF FREEDOM
South Africa 1994 - 2024

saMRC advancinglife

CONTENTS

GENERAL INFORMATION

PERFORMANCE INFORMATION

GOVERNANCE

HUMAN RESOURCES MANAGEMENT

PFMA COMPLIANCE REPORT

FINANCIAL INFORMATION

GENERAL INFORMATION

GENERAL INFORMATION

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ISBN:
978-1-928340-80-5

DATE OF PUBLICATION:
31 August 2024

LIST OF ABBREVIATIONS/ACRONYMS

AFS
Annual Financial Statements

AGSA
Auditor-General of South Africa

EMC
Executive Management Committee

B-BBEE
Broad-Based Black Economic Empowerment

CEO
Chief Executive Officer

CFO
Chief Financial Officer

PFMA
Public Finance Management Act, Act 1 of 1999

TR
Treasury Regulations

SCM
Supply Chain Management

FOREWORD BY THE CHAIRPERSON

PROFESSOR JOHNNY MAHLANGU

The South African Medical Research Council (SAMRC) remains steadfast in fulfilling its mandate to enhance the health and well-being of South Africans through rigorous research, capacity building, innovation, and technology transfer.

On behalf of the SAMRC Board, I am happy to present the 2023/24 Annual Report, which demonstrates SAMRC's commitment to upholding the highest standards of corporate governance, accountability to key stakeholders, including Parliament, the National Department of Health, the general public, funding entities, and other pertinent parties.

Our commitment to operating lawfully, responsibly, ethically, and with integrity is unwavering. SAMRC demonstrates exemplary fiscal discipline and effective corporate governance, as underscored by our consistent attainment of multi-year clean audit outcomes. Furthermore, we prioritise allocating financial resources towards impactful research initiatives, aligning our endeavours with our nation's prevailing health priorities and imperatives. Because of our good governance record, most international funding organisations are comfortable allocating research grants to us, and South African taxpayers can be assured that their tax money is being spent responsibly because good governance ensures transparency, accountability, effectiveness and ethical conduct.

This Annual Report comes at a time when the country has just come out of elections and welcomed the seventh Government Administration since the dawn of our democracy in 1994. It is also at the time when South Africa is celebrating 30 years of democracy. The SAMRC has been a good corporate citizen, and this is supported by our research agenda, which, in this context, promotes equity and dignity in health and health care. We do, however, acknowledge that there is still a lot that needs to be done to improve the quality of life for our people, and we remain

committed to supporting our government's priorities, strategies, and frameworks to achieve that.

The SAMRC takes pride in its proactive communication and dissemination of research findings and innovative solutions. We remain dedicated to fostering transformation and capacity development within the field of medical science research. This is evidenced by our investments in nurturing the talents of PhD candidates, post-doctoral fellows, and early to mid-career scientists.

Moreover, SAMRC operates with streamlined corporate support functions, optimising efficiency and ensuring that resources are directed towards our core mission. We are committed to remaining at the forefront of advancing health outcomes and contributing meaningfully to the advancement of medical research in South Africa.

The organisation is also entering the final leg of its 2020/21 to 2024/25 strategic plan and will soon embark on preparing the strategic plan 2025/26 to 2029/30, which will focus on developing clear strategic goals and objectives and regularly monitoring and evaluating its performance against these targets.

From a risk management point of view, the SAMRC has a robust system in place to identify, assess, and mitigate risks to its operations and reputation. This involves conducting regular risk assessments and implementing appropriate measures to manage and mitigate identified risks.

In the financial year 2024/25, there is a change in the office of the SAMRC President and CEO as we welcome Professor Ntobeko Ntusi as the new President and CEO. In the same breath, we are grateful to Professor Glenda Gray, who has been in the driving seat for the past 10 years. During her tenure, Professor Gray has been instrumental in resource mobilisation, and maintenance of collaborative research, as well as her commitment to addressing transformation in medical science through various programmes. With this remarkable track record, the SAMRC is poised to fulfil its mandate of enhancing South Africa's health and quality of life through rigorous health research. In her forthcoming full-time science role, Professor Gray will leverage her extensive experience to deliver impactful scientific outcomes. She reassures her unwavering commitment to the SAMRC and the medical research community. On behalf of the Board, Senior Executive team, and the entire SAMRC community, collective appreciation is extended to Professor Gray for her diligent service to the SAMRC, South Africa, Africa and the World. We also offer our unwavering support to Professor Ntusi, and we wish him well in the new role.

In conclusion, our sincere appreciation goes to the Minister of Health, Dr Joe Phaahla, the entire National Department of Health, the SAMRC Executive Management and staff and our stakeholders for their support and contribution in making the SAMRC the organisation that it is today.

Professor Johnny Mahlangu
SAMRC Board Chairperson

A NOTE FROM THE PRESIDENT AND CEO

PROFESSOR GLENDA E. GRAY

I am honoured to present my final Annual Report for the South African Medical Research Council (SAMRC) for the 2023/24 fiscal year. At SAMRC, our focus is on conducting and funding health research, innovation, capacity development and research translation.

Through the internal and external research units, several collaborating centres, strategic projects and initiatives, including recipients of self-initiated research grants, SAMRC researchers are conducting research that is responsive to the burden of disease in South Africa, Southern, Eastern and Western Africa.

The SAMRC showed commendable performance during the 2023/24 financial year, with most of our planned deliverables achieved. This achievement underscores SAMRC's commitment to its mission and objectives and its ability to effectively execute its strategic plans.

The successful completion of the planned strategic activities indicates that SAMRC effectively utilised its resources, including financial, human, and infrastructural, to carry out its core functions as mandated by the MRC Act 58, 1991 (as amended). These functions include research initiatives, capacity-building programmes, community outreach efforts, and policy advocacy campaigns aimed at improving public health outcomes in South Africa.

This good performance has positive implications for public health in South Africa, as it reflects progress towards addressing key health challenges and advancing scientific knowledge in areas such as infectious diseases, non-communicable diseases, maternal and child health, and health systems strengthening.

Some of the key highlights could be summarised as follows: we enhanced our B-BBEE rating from level 8 to level 5 and have plans for further improvement in this area. An internal talent pool was utilised to fill all Deputy Director positions, aiming at nurturing the SAMRC's senior leadership pipeline. An extension of the Strategic Health Innovation Partnerships (SHIP) award from the Department of Science and Innovation has been secured. This programme has been managed by SAMRC since 2013, supporting approximately 50 innovation projects annually and the Department of Science and Innovation has pledged over R265 million to support SHIP until 2025/26. The SAMRC received a substantial grant of

over US $45 million from USAID for the "HIV Vaccine Innovation, Science, and Technology Acceleration in Africa (HIV-VISTA)" programme, aimed at developing and testing novel HIV vaccines in Africa. Additionally, SAMRC entered a partnership with Afrigen Biologics and mRNA Victoria to expedite collaboration on next-generation mRNA vaccines and medicines. In terms of research funding, the SAMRC awarded a R21 million grant to the South African TB Vaccine Initiative for Phase III of the Regional Prospective Observational Research on Tuberculosis Project (RePORT III), for basic science and biomarker research to advance TB diagnostics, drugs, and vaccines. The SAMRC was appointed as the project executing agency and will report to the Department of Science and Innovation through a steering committee as part of the agreement that South Africa signed with Germany's KfW Development Bank for vaccine development and production. Under the agreement, the German government, through KfW, will provide South Africa with €20 million for vaccine production over a period of five years. The grant is exclusively for financing equipment for the development, production and certification of active pharmaceutical ingredients for vaccine production in South Africa.

And recently, we signed a Memorandum of Agreement (MOA) with Thermo Fisher Scientific Inc. to collaborate on the establishment of a Centre of Excellence and training programme in the field of molecular biology and life sciences in South Africa. The purpose of this collaboration is to address the challenges faced by the African continent in upskilling graduates and laboratory personnel, particularly in the areas of practical applications and exposure to the latest technologies in molecular biology and life sciences.

Going forward, one of SAMRC's areas of focus is the localisation of research and development (R&D) and its profound impact on fostering innovation at scale. We firmly believe that by localising R&D efforts, we can cultivate innovative solutions that directly address the health challenges confronting South Africans. This commitment entails investing in local talent, forging partnerships with domestic institutions, and conducting research aligned with the South African context. Furthermore, SAMRC is dedicated to nurturing local capacity in research and innovation through comprehensive training and mentorship initiatives.

Our ongoing pursuit of organisational transformation, scientific advancement, and leadership development remains central to our strategic vision. A decade-long review of SAMRC's transformation efforts underscores significant demographic shifts toward equity across various intramural and extramural dimensions. Notably, there has been a substantial increase in the representation of Black and Black African individuals within the SAMRC Board, the Executive Management Committee, and throughout our workforce. Similarly, there has been a marked rise in the number of Black and Black African recipients of scholarships, research grants, and Extramural Research Unit designations.

Our transformation plan encompasses key pillars such as employment equity, personal and interpersonal development, professional training programmes, broad-based black economic empowerment, and interinstitutional collaboration. We are confident these pillars will fortify SAMRC's resilience amid the prevailing uncertainties, ultimately benefiting all stakeholders.

As this will be my last Annual Report as the CEO and President of the SAMRC, I reflect on my tenure with pride. Leading this esteemed organisation for the past decade has been a privilege. Working in tandem with an outstanding Senior Executive team, we've accomplished notable milestones, such as securing five consecutive clean audits and spearheading transformative grant funding initiatives that substantially enhance support for young scientists, black African scientists, and women. We have also forged essential collaborations and partnerships poised to propel scientific research forward.

The SAMRC will remain my home as I transition into full-time research focusing primarily on HIV vaccines and other areas of vaccinology to address pressing health challenges across the African continent. I am committed to fostering partnerships with local and international collaborators to advance medical science and research in South Africa.

In conclusion, I would like to extend my heartfelt gratitude to the National Minister of Health, the Board, the Executive Management Committee, the SAMRC staff, and all stakeholders for their unwavering support throughout my tenure. I am profoundly grateful for the opportunity to serve SAMRC, the scientific community, and the public at large. To the new President and CEO, Professor Ntobeko Ntusi, I offer my support and best wishes for success in guiding SAMRC towards even greater heights.

Professor Glenda E. Gray
SAMRC President and Chief Executive Officer

ACHIEVEMENTS AND HIGHLIGHTS

New Partnerships to Support Research and Innovation for Health Transformation in South Africa and Beyond

The SAMRC is ideally placed and is mandated to contribute directly to health transformation in South Africa and does so through its core functions, which include conducting research, funding research and supporting research capacity development, innovation and research translation. While the SAMRC's contribution to health transformation has been immense throughout its history, this was particularly heightened following the revitalisation of the SAMRC between 2012 and 2014, which resulted in a substantial increase in funding and expansion of its research, innovation and capacity development programmes. Through research conducted or funded by the SAMRC, substantial scientific advancements have been made on the extent, causes and management of the priority diseases and disorders in South Africa as well as the development and testing of new or improved health solutions to address these, as evidenced throughout this and previous annual reports.

A highlight of the reporting was the cementing of new and extension of existing funding partnerships that will bring in substantial additional funding through the SAMRC over the next 3-5 years. These partnerships and new awards will benefit the broader health research and innovation ecosystem in South Africa, with some extending beyond our borders to include other African countries. They include the following:

Extension of the Strategic Health Innovation Partnerships Hosting Agreement

Strategic Health Innovation Partnerships (SHIP) is a flagship programme of the Department of Science and Innovation (DSI) and a partnership with the SAMRC created to coordinate and fund multi-disciplinary product development and innovation projects in the field of health. Since its establishment in 2013, SHIP has been a significant contributor to the national innovation system of the country. The SAMRC has been hosting and managing the SHIP programme since 2013, supporting around 50 innovation projects per year. A highlight of 2023/24 reporting period was the additional commitment of just over R265 million by the DSI to support SHIP until 2025/26. This commitment is critical for the continuity of the current SHIP investments as well as expansion to support additional priority health solutions that will impact directly on the health of the nation.

Partnership with the NIH for the US-South Africa Programme for Collaborative Biomedical Research

The US-South Africa Programme for Collaborative Biomedical Research was established through a Memorandum of Understanding between the SAMRC and the US National Institutes of Health (NIH) in 2013 with the intent to (i) establish or expand long-term relations between scientists from South Africa and the United States, in order to perform high-quality biomedical and behavioural research leading to scientific discovery; (ii) build long-term collaborations focused on health research between NIH-supported institutions in the US and South African institutions supported by the SAMRC; and (iii) foster the expansion of health research skills among programme participants, with a particular focus on the transformational agenda in South Africa. The SAMRC and NIH entered into a Grant Agreement in April 2014 for a matched commitment of US$4 million per year each over 5 years to support collaborative biomedical research projects between US and South African investigators in the fields of tuberculosis, HIV/AIDS, and HIV-related co-morbidities including malignancies. In its first five-year Phase from 2014 to 2019, the joint programme supported a total of 34 awards to SA – US collaborative research projects, administered by the NIH. These projects have generated outstanding scientific discovery, resulted in multiple publications and presentations, and trained many young investigators in South Africa. The SAMRC-NIH joint programme has also strengthened South African research institutions' research management and administrative capacity. The programme was extended for a further five

years, from 2019/20 to 2023/24, with a matched R45 million per annum contribution from the SAMRC and is currently supporting 18 awards. Phase 2 of the programme included the original scientific areas of interest but was expanded to include sexually transmitted infections, parasitic infections, arboviruses and emerging/re-emerging viral pathogens, vector biology and control, and the impact of alcohol use on HIV/AIDS. It also encouraged collaboration with underrepresented groups of scientists and historically disadvantaged institutions in South Africa, and scientists in Kenya, Lesotho, Zimbabwe, and Uganda.

As a result of the success of the first 2 programmes, the SAMRC and the NIH concluded an agreement in 2023/24 for a third phase of the programme starting in 2024/25. The SAMRC will contribute US $1M per annum for 5 years and the NIH around US $3M p.a. The collaborating institutions in the USA include the National Institute of Allergy and Infectious Diseases (NIAID), National Institute of Child Health and Human Development (NICHD), National Cancer Institute (NCI), National Institute of Mental Health (NIMH), National Institute on Alcohol Abuse and Alcoholism (NIAAA), and Office of AIDS Research (OAR). The call for proposals will be launched early in the 2024/25 financial year with awards starting in 2025/26 and will see around 10 new collaborative projects being supported.

Partnership with the UK Research and Innovation Medical Research Council

A new partnership between the SAMRC and the United Kingdom Research and Innovation Medical Research Council (UKRI MRC) was established during the 2023/24 financial year to promote collaboration between researchers in South Africa and the UK to tackle the health challenges of South Africa under the umbrella of the UK's International Science Partnerships Fund (ISPF). This joint research programme also aims to promote collaboration with researchers from other African countries. The UKRI MRC has committed just over £8 million and the SAMRC R24 million over 3 years to support research projects led by South African researchers in the areas of non-communicable diseases (NCDs), co-morbidity or multi-morbidity of infectious diseases and NCDs, and climate and health, one health and zoonosis. The requests for applications in these priority areas were released in February 2024 and awards are anticipated to be made in the last quarter of 2024. The focus of the programme is on translational research that integrates laboratory-based research, clinical research, and population-based research, with the long-term objective of improving scientific understanding of, and providing solutions for, the unique attributes of NCDs, co-and multi-morbidities involving both infectious diseases and NCDs, and One Health in African populations.

Partnership with ANRS on Tuberculosis Research

A further exciting new partnership approved in 2023/24 is one with the ANRS-MIE (Agence Nationale du Recherche du SIDA, Maladies Infectieuses Emergentes) in France on TB research. ANRS is the principal French Government Infectious Diseases Research Agency and is the main funder of infectious diseases research in francophone Africa. To extend this support to anglophone Africa in the hope of bringing together researchers from these two continental regions into closer collaborative networks, ANRS-MIE has committed up to €2 million over three years to jointly support research in South Africa with a contribution from the SAMRC of up to R19.5 million. The partnership will focus on supporting research on TB, with some of the key research priorities being vaccines, transmission, sub-clinical TB, diagnostics and paediatric TB. A request for applications will be released through ANRS during 2024 with the first awards anticipated in early 2025.

KfW Development Bank Investments in Vaccine R&D and Production

In September 2023, the Department of Science and Innovation (DSI) announced the conclusion of a financing agreement with Germany's KfW Development Bank to produce vaccines. Under the agreement, the German government, through KfW, will provide South Africa with €20 million for vaccine production over a period of five years. The grant is exclusively for financing equipment for the development, production, and certification of active pharmaceutical ingredients for vaccine production in South Africa. The grant will be used, among other things, to support the mRNA Technology Transfer Hub that South Africa is hosting for the World Health Organization as well as the South African vaccine manufacturing strategy, led by the DSI. The DSI is the recipient of the KfW financial support on behalf of the South African government and the SAMRC is the project executing agency. The programme

will provide critical support to bolster vaccine research and development, including pre-clinical research, infrastructure and establishing a vaccine manufacturing industry in South Africa. KfW will appoint an implementation consultant to support the KfW and to assist the SAMRC. The consultant will be responsible for providing sector-specific support for project planning, management, monitoring and evaluation, among others. Implementation of the programme will begin in April 2024.

BRILLIANT

In January 2024, the BRILLIANT (BRinging Innovation to cLinical and Laboratory research to end HIV In Africa through New vaccine Technology) Consortium held its first in-person meeting in Cape Town, South Africa.

As background, the BRILLIANT Consortium was awarded funding amounting to US $45.6 million over a period of 5 years by USAID (US Agency for International Development) through a Cooperative Agreement with the SAMRC as the lead organisation. The partners in the consortium are from 8 African countries viz. South Africa, Nigeria, Kenya, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe. This funding is for African institutions and scientists, to lead the discovery, design and testing of HIV vaccine candidates and will provide even more opportunities for scientists across sub-Saharan Africa to advance HIV vaccine research and development and leverage the lessons learned from decades of U.S. government investments.

The purpose of the meeting was for members from the consortium organisations, representatives from USAID, collaborators (both current and potential) in the programme, and other stakeholders, including the US Health Attache, Gates Foundation, National Department of Health, and Department of Science and Innovation, to discuss and share information and knowledge on ongoing activities within the overall programme, particularly focusing on Year 1 work plans of the consortium.

As almost two-thirds of new HIV infections occur in sub-Saharan Africa, it is critical that African scientists lead this project. This award will broaden the field of partners and allow for greater leveraging of local resources, creative collaborations, and innovative science, which may be the source of a real breakthrough toward a safe and effective HIV vaccine.

STATEMENT OF RESPONSIBILITY AND CONFIRMATION OF ACCURACY FOR THE ANNUAL REPORT

To the best of our knowledge and belief, we confirm the following:

All information and amounts disclosed in the annual report are consistent with the annual financial statements audited by the Auditor-General of South Africa.

The annual report is complete, accurate and free from any omissions.

The annual report has been prepared in accordance with the guidelines on the annual report as issued by the National Treasury.

The Annual Financial Statements (Part F) have been prepared in accordance with the National Treasury standards applicable to the public entity.

The external auditors were engaged to express an independent opinion on the annual financial statements.

In our opinion, the annual report fairly reflects the operations, the performance information, the human resources information and the financial affairs of the public entity for the financial year ended 31 March 2024.

Yours faithfully,

Professor Glenda E. Gray
President & Chief Executive Officer

31 March 2024

Professor Johnny Mahlangu
Chairperson of the Board

31 March 2024

STRATEGIC OVERVIEW

Our mandate

The mandate of the South African Medical Research Council (SAMRC), in terms of the MRC Act 58, 1991 (as amended), is to improve the health and quality of life of South Africans. This needs to be realised through research, development, and technology transfer.

Who we are

The SAMRC was established in 1969 and is dedicated to improving the health of people in South Africa, through research, innovation, development, and technology transfer. The scope of research includes laboratory investigations, clinical research, and public health studies.

We conduct research on South Africa's quadruple burden of disease: maternal, newborn and child health, HIV/AIDS and TB, non-communicable diseases, and interpersonal violence. Our work is to acquire evidence-based information to inform health policy and practice and improve the quality and health status of people in South Africa.

We are the largest local funder of health research, medical diagnostics, medical devices, and therapeutics. We are pioneers in cutting edge medical innovations focusing on genomic research, the development of novel treatment regimens, vaccine development, diagnostic tools, and developing new drugs and devices.

Transformation remains an integral part of building sustainable health research capacity in South Africa, through Self-Initiated Research (SIR) grants, the Mid-Career Scientist programme, the Bongani Mayosi National Health Scholars Programme, and other programmes and platforms, the SAMRC will continue to address gender, racial, institutional, and geographic parity, and strengthen our capacity to flourish in the 21st century. As a custodian of health research, the SAMRC is building a healthy nation through research and innovation.

Our vision

Building a healthy nation through research, innovation and transformation.

Our mission

To advance the nation's health and quality of life and address inequality by conducting and funding relevant and responsive health research, capacity development, innovation, and research translation.

Our values

Pioneering

Partnering

Excellence

Respect

Integrity

Citizenship

LEGISLATIVE AND OTHER MANDATES

Constitutional mandate

The Constitutional (Constitution of the Republic of South Africa Act, 1996 (Act 108 of 1996), as amended) base that supports the SAMRC's mandate is:

- Section 10 (right to human dignity).
- Section 11 (right to life).
- Section 12 (right to freedom and security of the person).
- Section 14 (right to privacy).
- Section 24 (right to environment that is not harmful to health).
- Section 27 (right to healthcare, food, water, and social security).

In the Constitutional context, the outcome of SAMRC work must translate to some realisable proposition addressing one of these areas.

Statutory and other mandates

The Legal & Compliance Services Division of the SAMRC has identified 51 Acts of Parliament (with 23 of those characterised as primary (i.e., non-compliance therewith or parts thereof would be catastrophic to the business/mandate of the SAMRC). Further to that, 7 Good Practice Standards (local and international) have been identified to be applicable to the SAMRC. Last, 10 Regulatory Authorities have been identified to have authority over the business or conduct of the SAMRC.

The 51 acts include the following:

- SAMRC Act 58 of 1991, as amended.
  This is the enabling and founding legislation creating the SAMRC. It is instructive on the mandate of the SAMRC and the prioritisation of its research programmes. The SAMRC Act empowers the functional and authoritative structures of the SAMRC to source/employ such resources and engage the Executive Authority and such other key stakeholders as may be appropriate to give effect to the mandate of the SAMRC.
- The National Health Act 61 of 2003.
- Intellectual Property, Rights from Publicly Financed Research and Development Act, 2008.
- Employment Equity Act 55 of 1998, as amended.
- Labour Relations Act 66 of 1995, as amended.
- Employment Equity Act 55 of 1998, as amended.
- Basic Conditions of Employment Act 75 of 1997, as amended.
- Public Finance Management Act (No.1 of 1999 as amended by Act 29 of 1999).
- The Patents Act 57 of 1978.
- Copyright Act 98 of 1978.
- Trademarks Act 194 of 1993.
- Designs Act 195 of 1993.
- Implementation of Official Languages Act 12 of 2012.
- Protection of Personal Information Act 4 of 2013.
- Promotion of Access to Information Act 2 of 2000.

The Good Practice Codes include:

- King Code on Corporate Governance.
- Good Clinical Practices (GCP).
- Good Laboratory Practices (GLP).

The Regulatory Authorities include:

- Information Regulator created in terms of the Protection of Personal Information Act.
- South African Revenue Services.
- Health Professions Council of South Africa.
- South African Health Products Regulatory Authority
- National Health Research Ethics Council
- South African Nursing Council
- South African Dental Technicians Council
- South African Veterinary Council

Auditors

- Auditor-General South Africa
- Internal Auditors

Corporate governance embodies processes and systems by which public entities are directed, controlled and held to account. In addition to legislative requirements based on a public entity's enabling legislation and Companies Act, corporate governance, with regard to public entities, is applied through the precepts of the PFMA and run-in tandem with the principles contained within the King Report on Corporate Governance.

All these instruments are constantly monitored to attend to necessary reviews as and when public policy, professional practice and legislative changes are initiated.

ORGANISATIONAL STRUCTURE

Executive Management Committee

The SAMRC President and CEO heads the SAMRC Executive Management Committee, which the SAMRC Act assigns responsibility for the day-to-day management of the SAMRC.

Executive Management Committee

Prof Glenda Gray

SAMRC President & CEO

Prof Liesl Zühlke

Vice President Extramural Research & Internal Portfolio

Dr Michelle Mulder

Executive Director: Grants, Innovation and Product Development

Mr Sivuyile Ngqongwa

Chief Financial Officer

Ms Ntoza Bam

Executive Director: Human Resources

Mr Mzimhle Popo

Legal Counsel

Dr Mongezi Mdhluli

Chief Research Operations Officer

Prof Angela Mathee

Executive Director: Transformation

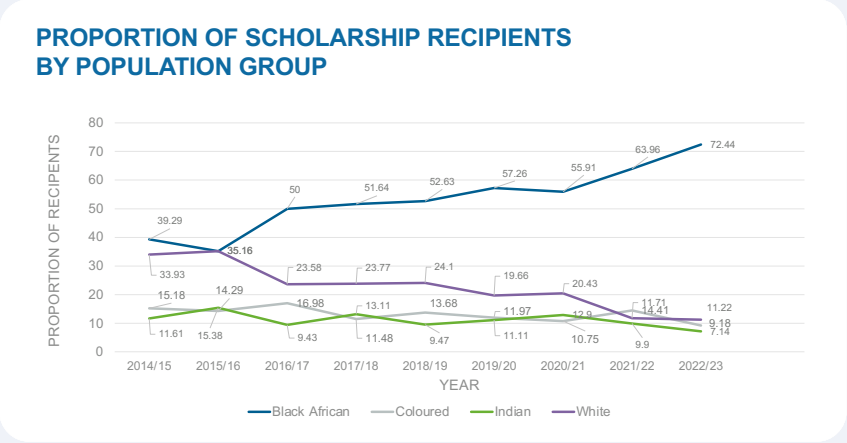
TRANSFORMATION AT THE SAMRC

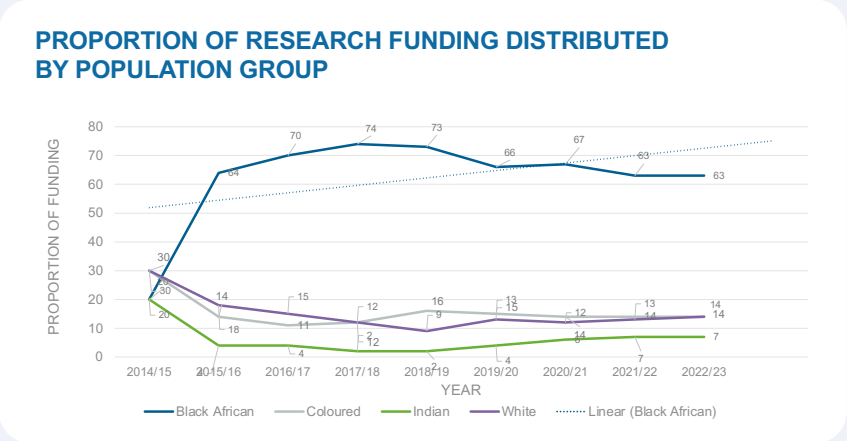
All organisations have to continuously evolve and transform in response to internal and external factors, including political, economic, social, health, environmental and cultural influences. At the SAMRC the Transformation agenda is driven by multiple departments, and coordinated by a dedicated Transformation Office, which is headed by an Executive Director who reports to the SAMRC President and CEO and is also a member of the Executive Management Committee (EMC). Our Transformation Forum is a representative reference group tasked with debating Transformation matters and making recommendations to the EMC. Transformation is a standing item on the agendas of the EMC and the SAMRC Board. The Corporate and Marketing Communications, Human Resources, Finance, Facilities Management and Supply Chain Management divisions play key roles in Transformation initiatives.

South African organisations have a particular moral obligation to correct the distorted institutional demographic profiles that were amplified during the years of apartheid. The SAMRC Transformation Plan: 2022–2025 describes the overall architecture for Transformation at the organisation, emphasising diversity, inclusion, personal and institutional flourishing, and equity. During this time diversity has continued to be a priority. A package of interventions, and checks-and-balances, have provided the basis for significant shifts toward employment equity across key indicators at the SAMRC.

As shown in Figure 1, these indicators include the demographic profiles of its employee community,

Figure 1. Positive shifts in the demographic profiles of SAMRC scholarships, research grants and employee profiles.





the recipients of SAMRC scholarships and research grants. What needs to be done going forward is training black independent health science investigators who may, in due course, assume leadership positions in the health research space at the SAMRC as well as elsewhere in the country. To this end, we are currently focusing on the establishment of a bespoke, multi-dimensional health science leadership development programme.

As the SAMRC is increasingly meeting or approaching its Transformation targets, we are concomitantly expanding our focus on inclusion: our organisational effort and practices to ensure that groups or individuals with different backgrounds are culturally and socially accepted and welcomed. In this regard, self-awareness (the conscious knowledge of one's characters, feelings and motives) has been underscored as a critical introspective approach to foster creativity, self-management, decision-making, learning, growth and leadership. These capacities are also vital for meeting our strategic goals, especially the generation of new knowledge, the translation of our research into interventions that benefit the South African population and increasing the pool of health scientists in the country.

The upgraded indoor and outdoor meeting spaces at the Ridge Road campus in Durban.

Highlights from the past year

Listening and Consultation

The SAMRC continued to facilitate engagement on general Transformation matters through our Transformation Forum. We have also organised opportunities to engage on specific issues, such as revamping SAMRC campuses to create new indoor and outdoor spaces for meetings and discussion, identification of hidden barriers to personal progress, unconscious bias and accommodations for people with disabilities. The conversations conducted have given valuable insight to the Transformation team and directly informed our Transformation agenda.

Creating Environments that Support Creativity and Inclusion

We initiated Environmental Committees at our Ridge Road and Pretoria campuses, which were instrumental in identifying key concerns and setting priorities for action. Under the auspices of the Ridge Road Environmental Committee, new indoor and outdoor meeting spaces were created for meetings, and exercise equipment was installed in the gardens to promote healthy lifestyles. In Pretoria, key concerns were identified, and responses are now in the planning phase.

A working group set up to mark the United Nations International Day for People with Disabilities 2023 successfully implemented a range of activities related to employee and public education, as well as concrete action to accommodate people with disabilities.

Self-awareness

For several years the Human Resources department has provided opportunities for employees to identify their personality type to strengthen self-awareness. The tool being used is the Enneagram, which is widely used in the business sector internationally. Evaluations show that the experience is highly rated and impactful, and consequently, over the past year we have escalated the pace of the rollout

of Enneagram workshops, especially for teams. Anecdotally, managers' report a marked increase in understanding and empathy within teams, and a decline in conflict, following Enneagram experiences.

Culture and Relationships

Over the past year the SAMRC's Human Resources department, with support from the Transformation Office, has facilitated a programme of lunchtime webinars to improve personal capacities, increase self-awareness, strengthen inclusion and amplify harmony within teams. The webinars are popular and topics in 2023/24 have included:

- The power of presence and listening
- Emotional intelligence
- Constructive feedback
- Agility and adaptability
- Building resilience
- Individual development planning
- The process of reflection
- Cultivating self-awareness

Support for Special Groups

We have also started special interventions to support specific groups as they join and leave the SAMRC. Our Newcomers Network is targeted at employees who have joined the organisation over the past six months. Our meetings provide opportunities for networking and guidance as new employees navigate our oftentimes complex organisation. For those who are retiring in the coming year, the "Sunset Crew" is a discussion forum that provides support as employees transition to post-retirement life. Currently, the focus is on financial planning, but expansion to other topics of relevance is expected in the coming months.

Employee Mental Health

With mental health being a growing concern in South Africa, we initiated a campaign to raise awareness of the wellness services provided to SAMRC employees, and encourage those who may be experiencing anxiety, depression and other concerns, to reach out to our Wellness Programme.

PARTNERSHIPS WITH OTHER COUNTRIES

BRICS TB Research Network

The Network, established in 2017, is an endeavour to collaborate with BRICS Ministries of Health and scientists to address the problems of TB in BRICS countries and to mobilise resources to find local solutions.

- One virtual meeting – hosted by South Africa – was held in May 2023.
- An in-person Network meeting – hosted by South Africa – was held in Durban in December 2023. The Network meeting was preceded by a one-day TB Symposium and two-day TB Summit.
- The SAMRC hosts the Network's website (www.brics-tb.net) and is hosting the Network's secretariat until further notice.

South Africa-US Programme for Collaborative Biomedical Research

The US-South Africa Programme for Collaborative Biomedical Research was established through a Memorandum of Understanding between the SAMRC and the US National Institutes of Health (NIH) in 2013. Phase 1 of the joint programme was initiated in 2015 and enabled US and South African scientists to collaborate on biomedical research in the fields of tuberculosis, HIV/AIDS, and HIV-related co-morbidities, including malignancies.

Phase 2 (2019-2024) expands on the original scientific areas of interest to also include sexually transmitted infections, parasitic infections, arboviruses and emerging/re-emerging viral pathogens, vector biology and control and the impact of alcohol use on HIV/AIDS. Phase 2 also encouraged collaboration with underrepresented scientists and Historically Disadvantaged Institutions (HDIs) in South Africa, and scientists in Kenya, Lesotho, Uganda and Zimbabwe.

About 18 joint US-SA projects are being funded in Phase II of the program. The total funding awarded to these projects during 2023 was US $5,182,402 to which the SAMRC contributed R45m during 2023.

In addition, two one-year supplemental awards were made by Fogarty International Center to existing D43 grantees in South Africa to support career enhancement opportunities and enable underrepresented scientists to build research skills and experience in biomedical research.

BRICS STI COVID-19 Projects

In response to the COVID-19 pandemic, the BRICS STI Framework Programme (http://brics-sti.org/) launched a call in July 2020 for multilateral basic, applied and innovation research projects to facilitate cooperation among the researchers and institutions in the five BRICS countries.

The Department of Science and Innovation (DSI) invited the SAMRC to manage the above call for project proposals in South Africa on their behalf.

Of the seven collaborative projects awarded in 2021-22 under this programme, the following collaborative projects continued in 2023.

Project Title	Principal Investigator	Institution
Multidisciplinary platform based on artificial intelligence for accelerating drug discovery and repurposing for COVID-19	Prof. Kelly Chibale	University of Cape Town
BRICS-ICT Alliance for Smart Resource Utilization to Combat Global Pandemic Outbreaks	Prof. Hanlie Smuts	University of Pretoria
SARS-CoV-2 Network for Genomic Surveillance in Brazil, Russia, India, China and South Africa	Prof. Tulio de Oliveira	University of KwaZulu-Natal/ Stellenbosch University

Project Title	Principal Investigator	Institution
Impact of COVID-19 on clinical manifestations, diagnosis, treatment outcome and immune response for pulmonary tuberculosis (Nickname: ABRICOT – Associative BRICS Research in COVID-19 and Tuberculosis)	Prof. Bavesh Kana	University of the Witwatersrand & National Health Laboratory Services
Epidemiological impact and intersection of the COVID-19 and tuberculosis pandemics in Brazil, Russia, India and South Africa	Prof. Anneke C Hesseling	Stellenbosch University
Repurposing of drugs and validation of lead compounds against main protease and RNA dependent RNA polymerase of SARS-CoV2	Prof. Anil Chuturgoon	University of KwaZulu-Natal

BRICS Multilateral Joint Science and Technology Research Collaboration – 2021 Call for Joint Project Proposals

The BRICS STI Framework Programme (FP) aims to support excellent research in priority areas which can best be addressed by a multinational approach. To this end, a call for joint project proposals in ten (10) thematic areas was launched in 2021.

DSI invited the SAMRC to manage the call in the following two thematic areas:

- Antimicrobial resistance: technologies for diagnosis and treatment
- Simulation and big data analytics for advanced precision medicine and public healthcare

Of the four joint projects selected for funding in the thematic area 'Antimicrobial resistance: technologies for diagnosis and treatment', three have an SA component and are ongoing. No projects were selected for funding in the thematic area 'Simulation and big data analytics for advanced precision medicine and public healthcare'.

The three (3) projects are:

Project Title	Principal Investigator	Institution
Novel siderophore fragments and hybrids for the diagnosis and treatment of drug resistant-infectious pathogens	Prof. Rui Krause	Rhodes University
Unlocking bacterial resistance to antibiotics with the development of novel metallo-β-lactamase inhibitors	Associate Prof. Tricia Naicker	University of KwaZulu-Natal
Target identification and efficacy enhancement of proven MDR overcoming Piper spp-derived compounds towards candidate drug development against WHO priority 1 (critical) MDR pathogens: P. aeruginosa, E. coli, K. pneumoniae, and M. tuberculosis	Dr Awelani Mutshembele	South African Medical Research Council, TB Platform

Collaboration with The George Institute, Australia

A Memorandum of Understanding has been signed between the SAMRC and the George Institute for Global Health (TGI) on 28 October 2022 for 3 years to expand collaboration between SAMRC and TGI scientists in the area of health research.

Against this background, the SAMRC published a call for Expression of Interest (EoI) on 17 July 2023. The EoI provided intramural SAMRC researchers (both seasoned and emerging, including postdoctoral fellows) the opportunity to submit concept papers with the view to undertake joint research projects with researchers from TGI in the research focus areas of:

- Health Systems including Universal Health Coverage (UHC) and National Health Insurance (NHI); and
- Burden of Disease including injury surveillance and multimorbidity.

The SAMRC and TGI approved seed funding for seven (7) full proposals starting 1 December 2023 for a 2-year period. The projects are:

No.	Title	Name of PI	SAMRC Unit
1	Exploring a syndemic approach to understanding the bi-directional link between type 2 diabetes mellitus and depression, and implications for the integrated care process in South Africa and India	Dr Nasheeta Peer	Non-communicable Diseases Research Unit
2	Collaboration to explore and identify research priorities for enhancing health systems governance and leadership for UHC in South Africa	Prof. Tamara Kredo	Health Systems Research Unit
3	A co-creation-based approach to developing an integrated e-health intervention package for non-communicable diseases and sexual and reproductive health for women and girls in South Africa	Dr Kim Jonas	Health Systems Research Unit
4	An investigation into improving screening, prevention, management, and control of maternal multimorbidity in South Africa and India	Dr Vundli Ramokolo	HIV and Other Infectious Diseases Research Unit
5	Formative work for the design of South Africa's first health-related quality of life (EQ-5D) adult valuation study	Dr Darshini Govindasamy	Health Systems Research Unit
6	Piloting the functionality of the African Network for Chronic Kidney Disease Epidemiology: The CKD-Africa Collaboration	Dr Cindy George	Non-communicable Diseases Research Unit
7	ENGAGE-WC: Empowering Non-fatal injury-data Governance, Analysis and Grassroots Engagement in the Western Cape	Dr Megan Prinsloo	Burden of Disease Research Unit

Global Forum on Bioethics in Research (GFBR)

The Global Forum on Bioethics in Research (GFBR) hosted the 17th Global Forum in Montreux, Switzerland from 28th – 29th November 2023. The focus of the 2023 Forum was *'Ethics of health research priority setting'*.

The GFBR, with its Secretariat hosted by WHO, is supported by several international research funders including the Wellcome Trust, UK Medical Research Council, the U.S. National Institutes of Health and the SAMRC. The Forum serves as a global platform for debate on ethical issues in international health research bringing together research ethics experts, researchers, policy makers and community members from developing and developed countries. Participants are selected on a competitive basis, based on structured submissions requiring a motivated account of each applicant's engagement. Dr Mongezi Mdhluli, SAMRC Chief Operation Officer represented the SAMRC at the 2023 Forum.

South Africa admitted to the International Human Frontier Science Program Organization

The Human Frontier Science Program Organization (HFSP), the National Research Foundation of South Africa (NRF), and the SAMRC entered into a Memorandum of Understanding (MoU) on 24th February 2023. The SAMRC and the NRF will serve as joint institutional members. South Africa is the 16th country to be admitted, and the only country from Africa.

This membership underscores the value that South Africa places on supporting fundamental research in the understanding of complex mechanisms in the life sciences to advance industry, health, and human well-being. As a member, South Africa will work closely with other HFSP members to support innovative basic research; apply novel and interdisciplinary approaches; and enable scientific exchanges across national and disciplinary boundaries to address fundamental biological problems.

Furthermore, this membership will significantly contribute to the research and education programmes supported by the NRF and the SAMRC and, by implication, the African continent. The membership will be informed by building critical relationships between researchers, students and other HFSP partner institutions that champion co-discovery, co-creation, skills development, knowledge sharing, innovation, and advancement in basic sciences. The annual financial contribution of South Africa as a full member of the HFSP is US $500,000 for the financial years 2023-2026. The NRF and SAMRC will make an equal contribution towards this membership fee.

The 22nd HFSP Awardees Meeting was held in Cape Town, South Africa from 6th – 8th December 2023 to honour South Africa as a new member country. HFSP organised the event with the SAMRC and NRF events teams.

14th African Rotavirus Symposium

The 14th African Rotavirus Symposium (ARS) was held in Abuja, Nigeria from 8th to 10th November 2023. The theme of the symposium was "*Rotavirus disease control in Africa: Vaccination and Surveillance as the basis of an integrated approach*" and was attended by more than 250 in-person attendees as well as virtual participants from more than 31 countries. The symposium was co-hosted by the Nigeria Centre for Disease Control and Prevention (NCDC) and the National Primary Health Care Development Agency (NPHCDA), in collaboration with the Federal Ministry of Health (FMOH), Paediatric Association of Nigeria (PAN), Nigerian Medical Association (NMA), Association of Public Health Physicians of Nigeria (APHPN), National Institute for Pharmaceutical Research and Development (NIPRD), Nigerian Society For Paediatric Infectious Disease (NISPID) in partnership with WHO Regional Office for Africa (WHO/AFRO), Bill & Melinda Gates Foundation (BMGF) and the SAMRC.

This biennial event is organised under the auspices of the African Rotavirus Network (AfrRN) to shape the agenda of rotavirus research and prevention globally, attracting key international opinion leaders in diarrheal diseases. The AfrRN is a regional network of institutions conducting research on paediatric diarrhoeal diseases in collaboration with the World Health Organization African Regional Office (WHO AFRO), Ministries of Health and other partners. The SAMRC hosts the Network's website (https://afr-rn.samrc.ac.za/) and serves as the Network's secretariat

PERFORMANCE INFORMATION

AUDITOR'S REPORT: PREDETERMINED OBJECTIVES

Performance planning, management and reporting

Overall performance planning and management

1. The Auditor General South Africa (AGSA) tested whether the public entity's performance planning and management processes, strategic plan and annual performance plan (APP) complied with the key requirements from legislation and the revised framework for strategic and annual performance plans. They did not identify any findings.

Audit of the annual performance report

2. The annual performance plan and report were submitted to AGSA for auditing on 31 May 2024.
3. AGSA undertook a findings engagement on specific indicators and the following indicators were selected for auditing:
    a) Number of accepted and published journal articles, book chapters and books by the SAMRC affiliated and/or funded authors
    b) Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC
    c) Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC
    d) Number of research grants awarded by the SAMRC
4. The above-mentioned indicators were selected to be audited as the programme is part of the SAMRC's mandate of improving the health and quality of life of the South Africans and therefore is of importance to the public
5. AGSA evaluated the reported performance information for the selected material performance indicators against the criteria development from the performance management and reporting framework. When an annual performance report is prepared using these criteria, it provides useful and reliable information and insights to users of the report on the public entity's planning and delivery on its mandate and objectives.

Audit results

6. AGSA did not identify findings:
    a) on the completeness of the indicators used for planning and reporting on performance.
    b) on the overall presentation of performance information in the annual performance report.
    c) misstatements in the reported performance information in the annual performance report submitted for auditing.

Refer to page 217 for the report on the annual performance.

OVERVIEW OF PERFORMANCE

Service Delivery Environment

The SAMRC was established to improve people's health in South Africa through research, innovation, development, and technology transfer. The scope of research includes laboratory investigations, clinical research, and public health studies.

The SAMRC conduct research on South Africa's quadruple burden of disease: maternal, newborn and child health, HIV/AIDS and TB, non-communicable diseases, and interpersonal violence. Its work is to acquire evidence-based information to inform health policy and practice and improve the quality and health status of people in South Africa.

The organisation is the largest local funder of health research, medical diagnostics, medical devices, and therapeutics. It is a pioneer in cutting-edge medical innovations focusing on genomic research, the development of novel treatment regimens, vaccine development, diagnostic tools, and developing new drugs and devices.

The SAMRC's overall performance is reflected under the Institutional Programme Performance Information section of this Part B of the annual report.

Organisational environment

The SAMRC was able to deliver on its mandate due to good governance, under the leadership of the Board, the Executive Management Committee and the dedicated staff.

Key policy developments and legislative changes

SAMRC was ready to adapt to the changes in policies and legislation, including POPIA.

Progress towards achievement of institutional Impacts and Outcomes

The SAMRC achieved its targets set out in the Strategic Plan. Most important is the role that the SAMRC played at the height of the COVID-19 pandemic through the Sisonke Programme and other projects/programmes.

Institutional Programme Performance Information

Administer health research effectively and efficiently

Impact Statement

Strengthening of corporate governance processes towards an unqualified audit opinion from the Auditor-General

Measuring Outcomes

Outcome	Outcome indicator	Baseline SP (2015-19)	Five-year target
1.1 To ensure good governance, effective administration and compliance with government regulations	1.1.1 A clean audit opinion on the SAMRC from the Auditor-General	Clean audit	Clean Audit
1.2 To promote the organisation's administrative efficiency to maximise the funds available for research	1.2.1 Percentage of the government allocated SAMRC budget spent on administration	20%	20%

Lead the generation of new knowledge

Impact Statement

Promote the improvement of health and quality of life (prevention of ill health, improvements in public health and treatment) in South Africa through research

Measuring Outcomes

Outcome	Outcome indicator	Baseline SP (2015-19)	Five-year target
2.1. To produce and promote scientific excellence and the reputation of South African health research	2.1.1. Number of accepted and published journal articles, book chapters and books by SAMRC affiliated and funded authors	3 150	3 550
	2.1.2. Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC	825	930
2.2. To provide leadership in the generation of new knowledge in health	2.2.1. Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC	1 830	1 925
2.3. To provide funding for the conduct of health research	2.3.1. Number of research grants awarded by the SAMRC	750	750

Support, through funding and other mechanisms, technology development and implementation, and innovations in health and technology delivery to improve health

Impact Statement

To build an innovation community, developing life changing health solutions for South Africa, Africa and beyond

Measuring Outcomes

Outcome	Outcome indicator	Baseline SP (2015-19)	Five-year target
3.1 To support the development of new or improved innovations aimed at improving health and targeting priority health research areas of focus	3.1.1 Number of new innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	NEW	20
	3.1.2 Number of ongoing innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	NEW	150
3.2 To develop new or improved innovations aimed at improving health priority research areas of focus	3.2.1 Number of innovation disclosures made by the SAMRC intramural research and innovation	NEW	5

Build human capacity for the long-term sustainability of the South African health research

GOAL 4

Impact Statement

To provide research support in the form of funding and supervision to the next generation of scientists in the broad field of health

Measuring Outcomes

Outcome	Outcome indicator	Baseline SP (2015-19)	Five-year target
4.1 To enhance the long-term sustainability of health research in South Africa by providing funding and supervision for the next generation of health researchers	4.1.1 Number of awards (scholarships, fellowships and grants) by the SAMRC for MSc, PhD, Postdocs and Early and Mid-Career Scientists	435	660
	4.1.2 Number of awards by the SAMRC to female MSc, PhD, Postdocs and Early and Mid-Career Scientists	NEW	488
	4.1.3 Number of awards by the SAMRC to Black South African citizens and permanent resident MSc, PhD, Postdocs and Early and Mid-Career Scientists classified as African	NEW	495
	4.1.4 Number of awards by the SAMRC to MSc, PhD, Postdocs and Early and Mid-Career Scientists from historically disadvantaged institutions (HDIs)	NEW	368
	4.1.5 Number of MSc and PhD students graduated or completed	NEW	360

Translate new knowledge into policies and practices to improve health

Impact Statement

To contribute to building public and policy-maker understanding of health, drivers of ill-heath, and practice, interventions and technologies that can prevent ill health and strengthen health services and encouraging use of research evidence in policymaker, practitioner and public decision-making

Measuring Outcomes

Outcome	Outcome indicator	Baseline SP (2015-19)	Five-year target
5.1. To facilitate the translation of health research	5.1.1. Number of local or international policies, reports and guidelines that reference SAMRC research	27	27
	5.1.2. Number of reports and guidelines (co)produced by the SAMRC intramural researchers	NEW	25
	5.1.3. Number of national or international bodies/committees that SAMRC employees serve on	NEW	250
	5.1.4. Number of conferences, seminars and continuing development points workshops supported by the SAMRC	NEW	50

OUTCOMES, OUTPUTS, OUTPUT INDICATORS, TARGETS AND ACTUAL ACHIEVEMENTS

No.	Outcome	Output	No.	Output indicator	Audited Actual Performance 2021/2022	Audited Actual Performance 2022/2023
Programme 1 – Administration						
1.1	To ensure good governance, effective administration and compliance with government regulations	Clean audit opinion	1.1.1	A clean audit opinion on the SAMRC from the Auditor-General	Clean Audit	Clean Audit
1.2	To promote the organisation's administrative efficiency to maximise the funds available for research	Efficient expenditure of government allocated budget	1.2.1	Percentage of the government allocated SAMRC budget spent on administration	16%	17%
Programme 2 – Core Research						
2.1	To produce and promote scientific excellence and the reputation of South African health research	Published journal articles, book chapters and books	2.1.1	Number of accepted and published journal articles, book chapters and books by SAMRC affiliated and funded authors	1 169	1 455
		Published journal articles by SAMRC grant-holders	2.1.2	Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC	265	445
2.2	To provide leadership in the generation of new knowledge in health	Published journal articles with the first or last author	2.2.1	Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC	637	775
2.3	To provide funding for the conduct of health research	Research grants awarded	2.3.1	Number of research grants awarded by the SAMRC	152	174

** As agreed with NDOH, the SAMRC APP 2023/24 was not re-tabled*

Planned Annual Target 2023/2024	Actual Achievement 2023/2024 until date of re-tabling*	Deviation from planned target to Actual Achievement 2023/2024	Reasons for deviations	Reasons for revisions to the Outputs/ Output indicators/ Annual Targets
Clean Audit	Clean Audit			No revision
20%	19%	1%	Overperformance because of our efficient and effective processes, and directing more financial resources towards the mandate of the SAMRC to conduct and funding research.	No revision
700	1294	594	Compliance to the publication's standard operating procedures, mobilisation of additional (financial) resources and stakeholders' engagements increased outputs. At the time of setting target, it was not expected that SAMRC will receive additional resources to conduct and fund more research.	No revision
180	373	193	Compliance with the publications standard operating procedures, mobilisation of additional (financial) resources and stakeholders' engagements increased outputs. At the time of setting target, it was not expected that SAMRC will receive additional resources to conduct and fund more research.	No revision
300	646	346	Compliance to the publications standard operating procedures, mobilization of additional (financial) resources and stakeholders' engagements increased outputs. At the time of setting target, it was not expected that SAMRC will receive temporary resources to conduct and fund more research.	No revision
160	221	61	Receipt of additional financial resources by the SAMRC led to awarding of more research grants than projected.	No revision

No.	Outcome	Output	No.	Output indicator	Audited Actual Performance 2021/2022	Audited Actual Performance 2022/2023
Programme 3 – Innovation and Technology						
3.1	To support the development of new or improved innovations aimed at improving health and targeting priority health research areas of focus	Innovation projects and platforms funded by the SAMRC	3.1.1	Number of new innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	18	20
			3.1.2	Number of ongoing innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	40	44
3.2	To develop new or improved innovations aimed at improving health priority research areas of focus	Efficient expenditure of government allocated budget	3.2.1	Number of innovation disclosures made by the SAMRC intramural research and innovation	3	1
Programme 4 – Capacity Development						
4.1	To enhance the long-term sustainability of health research in South Africa by providing funding and supervision for the next generation of health researchers	SAMRC bursaries and/or scholarships and/or fellowships provided for MSc, PhD, Postdocs, and Early and Mid-Career Scientists	4.1.1	Number of awards (scholarships, fellowships and grants) by the SAMRC for MSc, PhD, Postdocs and Early and Mid-Career Scientists	167	171
		Female students and/or Early and Mid-Career Scientists receiving SAMRC funding	4.1.2	Number of awards by the SAMRC to female MSc, PhD, Postdocs and Early and Mid-Career Scientists	122	120
		South African citizens and/or permanent residents students receiving SAMRC funding	4.1.3	Number of awards by the SAMRC to Black South African citizens and permanent resident MSc, PhD, Postdocs and Early and Mid-Career Scientists classified as African	108	118
		SAMRC scholarships/ fellowships provided for MSc, PhD, Postdocs and Early and Mid-Career Scientists at HDIs	4.1.4	Number of awards by the SAMRC to MSc, PhD, Postdocs and Early and Mid-Career Scientists from historically disadvantaged institutions (HDIs)	52	60
		MSc and PhD students graduated or completed	4.1.5	Number of MSc and PhD students graduated or completed	81	93

** As agreed with NDOH, SAMRC APP 2023/24 was not re-tabled*

Planned Annual Target 2023/2024	Actual Achievement 2023/2024 until date of re-tabling*	Deviation from planned target to Actual Achievement 2023/2024	Reasons for deviations	Reasons for revisions to the Outputs/ Output indicators/ Annual Targets
4	26	22	Mobilisation of more funds led to more support for innovation projects.	No revision
30	48	18	The delay in many of the projects due to COVID has resulted in a larger portfolio of ongoing innovation projects carried over to this financial year.	No revision
1	1	0		No revision
150	184	34	The projected target was exceeded because of mobilisation and redirection of resources leading to funding more scholars.	No revision
110	122	12	Projected target exceeded because of mobilisation and redirection of resources, and targeted funding strategy leading to funding more female scholars.	No revision
110	121	11	The projected target exceeded because of mobilisation and redirection of resources, and targeted funding strategy leading to funding more Black South African citizens and permanent resident scholars.	No revision
80	68	-12	Underperformance because the target was overestimated at the time of development of the strategic plan. However, SAMRC does not intend to adjust the targets as they set the tone for the organisation to significantly drive inclusion of HDI's in the process of building the next generation of research leaders. During the reporting period, SAMRC put resources and processes to improve performance on this indicator, hence a steady rise in performance over the past three financial years. As part of its transformation strategy, SAMRC aims to continue with this improved trajectory.	No revision
85	120	35	The projected target was exceeded because SAMRC funded more scholars and SAMRC researchers supported and supervised more scholars.	No revision

No.	Outcome	Output	No.	Output indicator	Audited Actual Performance 2021/2022	Audited Actual Performance 2022/2023
Programme 5 – Research Translation						
5.1	To facilitate the translation of health research	Local or international policies, reports and guidelines that reference SAMRC research	5.1.1	Number of local or international policies, reports and guidelines that reference SAMRC research	58	120
		Reports and guidelines produced by SAMRC intramural authors	5.1.2	Number of reports and guidelines (co)produced by the SAMRC intramural researchers	64	68
		SAMRC researchers invited/serving on national and international bodies/committees	5.1.3	Number of national or international bodies/ committees that SAMRC employees serve on	96	205
		SAMRC supported conferences, seminars and CPD workshops	5.1.4	Number of conferences, seminars and continuing development points workshops supported by the SAMRC	72	73

** As agreed with NDOH, SAMRC APP 2023/24 was not re-tabled*

Planned Annual Target 2023/2024	Actual Achievement 2023/2024 until date of re-tabling*	Deviation from planned target to Actual Achievement 2023/2024	Reasons for deviations	Reasons for revisions to the Outputs/ Output indicators/ Annual Targets
6	231	225	SAMRC is a world-renowned science council, and its researchers are invariably approached for scientific input into finding solutions for health issues, which led to overperformance. This overperformance indicates that SAMRC plays a role in research translation by producing these documents that inform health policies and practices.	No revision
7	41	34	SAMRC is a world-renowned science council and its researchers were highly involved in production of reports and guidelines, hence the target is exceeded. This overperformance indicates that SAMRC plays a role in research translation by producing these documents that inform health policies and practices.	No revision
50	202	152	SAMRC researchers are well sought after for their scientific expertise. This is evident in the number of committees and bodies that staff serve on. This overperformance indicates that SAMRC researchers are good national and international "citizens", and they play a role in research translation.	No revision
10	92	82	SAMRC supported and hosted more meetings and workshops than projected, hence the target is exceeded. This overperformance indicates that SAMRC plays a role in research translation by hosting and supporting these engagements.	No revision

Strategy to overcome areas of underperformance

Underperformance was noted in Programme 4, indicator 4.1.4, Number of awards by the SAMRC to MSc, PhD, Postdocs and Early and Mid-Career Scientists from historically disadvantaged institutions (HDIs). Strategies have been established to address this underperformance as highlighted in the deviation section of the performance table above.

RESEARCH PROGRAMMES AND UNITS WITHIN THE SAMRC

Intramural and extramural research units constitute our six research programmes. Intramural Research Units (IRUs) are based at the SAMRC campuses, and the scientists are directly employed by the organisation. Extramural Research Units (ERUs) enable scientists based at tertiary institutions to conduct research funded by the SAMRC. The research programmes and units are specified as follows:

Health promotion and disease prevention

RESEARCH PROGRAMME 1

NSDA 1: INCREASING LIFE EXPECTANCY

RESEARCH UNITS

1. Antimicrobial Resistance and Global Health Research Unit (ERU)
2. Centre for Health Economics and Decision Science-Research Unit (ERU)
3. Environment and Health Research Unit (IRU)
4. Hypertension and Cardiovascular Disease Research Unit (ERU)
5. Masculinity and Health Research Unit (ERU)
6. Mental Health, Alcohol, Substance Use and Tobacco Research Unit (IRU)
7. Microbial Water Quality Monitoring Research Unit (ERU)
8. Non-Communicable Diseases Research Unit (IRU)
9. Risk and Resilience in Mental Disorders Research Unit (ERU)
10. Rural Public Health and Health Transition Research Unit (ERU)

Maternal, child and women's health

RESEARCH PROGRAMME 2

NSDA 2: DECREASING MATERNAL AND CHILD MORTALITY

RESEARCH UNITS

1. Child and Adolescent Lung Health Research Unit (ERU)
2. Development Pathways for Health Research Unit (ERU)
3. Gender and Health Research Unit (IRU)
4. Maternal and Infant Health Care Strategies Research Unit (ERU)

HIV, AIDS, TB and other communicable diseases

RESEARCH PROGRAMME 3

NSDA 3: COMBATING HIV AND AIDS, AND DECREASING THE BURDEN OF DISEASE FROM TB

RESEARCH UNITS

1. Antibody Immunity Research Unit (ERU)
2. Centre for the Study of Antimicrobial Resistance Research Unit (ERU)
3. Centre for Tuberculosis Research Unit (IRU)
4. HIV and other Infectious Diseases Research Unit (IRU)
5. HIV-TB Pathogenesis and Treatment Research Unit (ERU)
6. Intersection of Non-Communicable Disease and Infectious Disease Research Unit (ERU)
7. Malaria Research Group (IRU)
8. Office of AIDS and TB Research (IRU)
9. TB Platform (IRU)
10. Vaccine and Infectious Diseases Analytics Research Unit (ERU)

Health systems strengthening

RESEARCH PROGRAMME 4

NSDA 4: STRENGTHENING HEALTH SYSTEM EFFECTIVENESS

RESEARCH UNITS

1. Biostatistics Research Unit (IRU)
2. Burden of Disease Research Unit (IRU)
3. Cochrane South Africa (IRU)
4. Health Services to Systems Research Unit (ERU)
5. Health Systems Research Unit (IRU)

Public health innovation

RESEARCH PROGRAMME 5

RESEARCH UNITS

1. Biomedical Research and Innovation Platform (IRU)
2. Drug Discovery and Development Research Unit (ERU)
3. Genomics Platform (IRU)
4. Herbal Drugs Research Unit (ERU)
5. Pan African Centre for Epidemics Research Unit (ERU)
6. Primate Unit and Delft Animal Centre (IRU)

Biomedical research

RESEARCH PROGRAMME 6

RESEARCH UNITS

1. Antiviral Gene Therapy Research Unit (ERU)
2. Bioinformatics Capacity Development Research Unit (ERU)
3. Cardiometabolic Health Research Unit (ERU)
4. Genomics of Brain Disorders Research Unit (ERU)
5. Platform for Pharmacogenomics Research and Translation Research Unit (ERU)
6. Precision and Genomic Medicine Research Unit (ERU)
7. Precision Oncology Research Unit (ERU)
8. Stem Cell Research and Therapy Research Unit (ERU)
9. Wound and Keloid Scarring Translational Research Unit (ERU)

SAMRC STRATEGIC RESEARCH PROGRAMMES

HEALTH PROMOTION & DISEASE PREVENTION

RESEARCH PROGRAMME 1

PURPOSE OF THE PROGRAMME

To conduct research using a life course approach to healthy lifestyles, early diagnosis, and cost-effective prevention and management of diseases through health promotion.

UNITS THAT CONSTITUTE THIS PROGRAMME

1. Antimicrobial Resistance and Global Health Research Unit (ERU)
2. Centre for Health Economics and Decision Science-Research Unit (ERU)
3. Environment and Health Research Unit (IRU)
4. Hypertension and Cardiovascular Disease Research Unit (ERU)
5. Masculinity and Health Research Unit (ERU)
6. Mental Health, Alcohol, Substance Use and Tobacco Research Unit (IRU)
7. Microbial Water Quality Monitoring Research Unit (ERU)
8. Non-Communicable Diseases Research Unit (IRU)
9. Risk and Resilience in Mental Disorders Research Unit (ERU)
10. Rural Public Health and Health Transition Research Unit (ERU)

PROGRAMME STRATEGIC OBJECTIVES

- To contribute towards the body of evidence by gaining a better understanding of how factors such as nutrition, physical activity, mental health, healthy behaviours, environment and stress factors affect life expectancy.
- To be a leader in scientific research by contributing to new knowledge in the area of health promotion and disease prevention.
- To train and mentor high-quality postgraduate students and postdoctoral fellows who can compete in the science, health and/or education sectors locally and abroad to advance the cause of health promotion and disease prevention.
- To assist the National Cancer Registry in producing cancer surveillance statistics and cancer trend reports.
- To translate research results into health and education policy, the practice of healthcare professionals, and the configuration of health and education systems.
- To develop interventions that affect and address poor nutrition, lack of physical activity, excessive alcohol intake, and risky sexual behaviours.
- To add to evidence-based interventions that investigate factors affecting life expectancy.
- To train and educate healthcare staff and community members to manage, control and reduce the incidence of non-communicable diseases.

RESEARCH HIGHLIGHTS UNDER THIS PROGRAMME

Prioritising responsive research through impactful interventions

In the 2023/24 reporting period, the Antimicrobial Resistance and Global Health Research Unit undertook the following projects:

(1) Acquisition of antibiotic-resistant gut bacteria and impact of gut microbiota, with the goal to understand the variables impacting the acquisition and carriage of gut bacteria antibiotic resistance (AR) early on in life in the community setting. We are also interested in understanding how the diversity and burden of acquired AR are influenced by the composition of the developing gut microbiota. Data on knowledge, attitude and practice (KAP) on the use of antibiotics was collected from 800 participants. The expected impact is that evidence from the gut resistance assessment and KAP activities will be fed into a process of knowledge translation and responsive dialogue approaches to co-produce appropriate educational packages for community AR stewardship programmes. In this period, enrolment into the community-based prospective child/mother pair cohort and stool specimen collection continued; alongside data collection on breastfeeding practices; illness, treatment, and vaccination histories for 62 child/mother pairs, and (2) Undisclosed antiretroviral exposure and HIV drug resistance, with the goal to describe the burden of undisclosed prior exposure to antiretrovirals before treatment initiation and the impact thereof on drug resistance development.

Participants at a National Antimicrobial Resistance Symposium held in September 2023.

Engagement with the authorities of the Dzimauli community in Vhembe district on antimicrobial resistance stewardship.

With regards to the expected impact, firstly, if our hypothesis that a substantial number of HIV-infected individuals do not disclose prior exposure to antiretrovirals at the time of entering the universal test and treat programme is proven, a more robust screening before treatment initiation would have to be adopted for an enhanced treatment outcome. Secondly, the definition of transmitted HIV drug resistance would require modification. Thus far, about 500 plasma samples were collected to determine the prevalence of prior exposure to antiretrovirals. In addition, 77 individuals were enrolled in a prospective cohort. The prevalence of non-exposure will be determined from the 577 individuals; while the impact of prior exposure to antiretrovirals on drug resistance development will be determined from the prospective cohort, over a 12-24 month period.

Equitable capacity development for empowering communities

The unit is taking care to safeguard gender equity for key members, especially black females such as Dr Lufuno Mavhandu-Ramarumo and Prof Angelina Maphula, who are emerging researchers and key investigators each leading specific aspects of virology and psychology, respectively. Female students are also supported and encouraged in advancing their careers to become independent research scientists.

Dr Lufuno Mavhandu-Ramarumo was selected by the Department of Higher Education and Training, and Science and Innovation to participate in the Future Professors Programme PHASE 2 COHORT 2 (2024-2026). She also serves in the adjudication panel for the South African Women in Science Awards (2023 – 2025). In addition, she was selected as a mentee in the Southern African Research and Innovation Management Association (SARIMA) COP Mentorship Programme on research ethics and integrity professionals across the SADC (March to Aug 2024). Prof Angelina Maphula participated in the Fogarty International Center/NIH project on Sustainable Academic Capacity Building for Excellence through Research and Training at the University of California, Los Angeles, USA. Ms Mukhethwa Munzhedzi, a PhD student, was awarded a 6-month fellowship for training on bioinformatics in metagenomics analysis at the International Centre for Genetic Engineering and Biotechnology in Cape Town.

The Unit Director received the B2 rating award from the National Research Foundation, attesting to his status as an internationally acclaimed scientist based on his research outputs and the impact of his research. He was also a recipient of the 2023 Gold Scientific Merit Award by the SAMRC for his significant contribution to health research.

Science for creating a healthier society

The overall goal of the unit is to co-produce evidence, to mitigate antimicrobial resistance, with study communities and stakeholders for intervention to advance global health imperatives – enhancement of access and equity to health. To engage in the process of knowledge co-production, the unit in September 2023 organised a symposium to engage stakeholders on antimicrobial resistance stewardship. Over 60 delegates comprised the study community representatives, public health sector clinicians, researchers, and decision and policymakers from national and provincial departments. The symposium will be an annual event, and through this process, we aim to prepare decision and policymakers to readily take up the evidence produced by the unit and the community for appropriate intervention.

In celebration of 30 years of democracy in South Africa

As the country celebrates 30 years of democracy, the unit reminds itself that it is in a unique position as an agent for change through developing excellence and leadership in science and innovation. Through this commitment, the unit would produce citizens with the requisite skills to serve the country through relevant research and research management for socio-economic development and well-being of communities.

Centre for Health Economics and Decision Science Research Unit

Unit director:
Prof. Karen Hofman

Prioritising responsive research through impactful interventions

In a resource-constrained environment with shrinking health budgets, deliberate prioritisation is a critical and effective resource allocation strategy. The PRICELESS unit provides evidence to guide priority setting for health in South Africa. By applying innovative priority-setting approaches, we have developed frameworks that can be used for evidence-based resource allocation decisions fairly and equitably under the proposed National Health Insurance (NHI). We aim to provide evidence of the best buys for health.

Research in 2023/24 includes an economic analysis of whether a child support grant extended back through pregnancy would be cost-effective; costing of an intervention for early child development for deaf children; costing of the treatment of prostate cancer; costing providing ante-natal care to migrant women in Johannesburg. Our food policy work includes a study with children understanding the marketing of ultra-processed foods on their journeys to school, using interactive art-based methods; and measuring the health and fiscal impact of including fruit juices and ultra-processed foods in the Health Promotion Levy (tax). Our legal team has been supporting work on front-of-pack labels on ultra-processed foods and the right to food. We have also been involved in work looking at industry interference in policies relating to diet, physical activity and COVID-19 in Johannesburg.

Equitable capacity development for empowering communities

In the past year, one staff member graduated from the MPH Health Economics Programme, and one was granted a Wellcome Trust scholarship to study for a PhD at Sheffield University. We currently have four professionals who are preparing their PhD proposals. This demonstrates our commitment to developing our team's skills and investing in their professional growth.

Our unit coordinates and teaches the MPH Health Economics Programme aimed at building capacity in the scarce skill of health economics. The programme consists of 13 blocks over two years and the completion of a research thesis in the third year. In 2023/24 we taught three specific health economics modules. The MPH Health Economics is oversubscribed with ten times more applicants than available spaces. The team supervises and evaluates Masters and PhD theses in the fields of Health Economics and Public Health.

PRICELESS provides technical support to other sub-Saharan African countries in the field of law and policy evaluation as well as economic evaluation. This support involves collaborating closely with policymakers and researchers to develop evidence-based policies that promote health and equity in their respective countries.

Science for creating a healthier society

PRICELESS believes very strongly in the popular dissemination of our work. We present our research findings to government and allied bodies such as NEDLAC and the National Planning Commission. We also present our work directly to government stakeholders such as the Department of Health and National Treasury. The unit works in partnership with the Healthy Living Alliance (HEALA) a community alliance that advocates for healthy diets and policies

that decrease obesity and non-communicable diseases (NCDs). We engage with them regularly to disseminate our research.

PRICELESS also engages directly with the media to get our research findings to reach the maximum audience. PRICELESS SA's media engagement report for the year 2023/24 recorded that our media engagement earned a total Advertising Value Equivalent (AVE) of R 8,196,171.00. We disseminated our work through television channels such as ENCA, radio stations such as Radio 702, Cape Talk, and SAFM; newspapers such as Business Day, Daily Maverick, Witness, and Times Live and many more both in print and online. We also contribute to panel discussions at events such as the Human Rights Day festival.

A specific example was the South African launch of the Lancet Series on Commercial Determinants of Health. The launch featured a panel discussion by an eminent panel of local and international public health, civil society, government, scientific, and academic representatives and moderated by the Maverick Citizen. PRICELESS-SA arranged a media partnership with The Conversation Africa to publish a series of CDOH-related articles to coincide with the publication of The Lancet Series.

In celebration of 30 years of democracy in South Africa

Although life expectancy in South Africa has not changed significantly since 1994 (63 to 65 years) there have been some gains in health. SA has introduced a vaccine schedule that saves thousands of children's lives and now has the largest treatment programme for HIV infection in the world. However, we are now confronting an obesity epidemic that has led to an increase in chronic NCDs that threaten health systems, economies, and lives, but our policies and resource allocation have not kept pace. There has been some progress including the tobacco control legislation in 1993, the 2018 Health Promotion Levy (sugary beverage tax), and mandatory salt regulations (2016, 2019). Although these contribute to reducing NCDs, much more is required.

To ensure an appropriate NHI – we need to understand the costs of good quality health interventions in the health system and which interventions in other sectors would decrease morbidity and mortality, especially for the most vulnerable. We need a commitment to the control of the commercial determinants of health such as alcohol, ultra-processed foods, and air pollution. We need to focus on measuring equity in health and then dealing with the inequities. We need to ensure that our health services are governed according to the highest standards to ensure that all South Africans can reach their full potential. Priority setting is more important now than ever, we need to be making impactful choices and trade-offs in our resource-constrained setting to ensure the maximum health for our population.

Delegates from the National Institute for Health and Care Research at PRICELESS offices.

An invite to the exhibition on the history of processed food which was hosted by PRICELESS and Adler Museum.

Environment and Health Research Unit

Unit director:
Dr. Renée Street

Prioritising responsive research through impactful interventions

The Environment & Health Research Unit (E&HRU) conducts research towards eliminating or reducing environmental hazards to health, especially in the most vulnerable or marginalised in South Africa. Our study in Limpopo Province investigated arsenic exposure in villages. Elevated blood arsenic in exposed community members, linked to borehole water and contaminated soil, underscores the critical need for environmental monitoring to protect public health.

Concerns also persist about lead exposure from ceramic ware, with another study finding elevated lead in newly purchased items. Although lead leaching rates were relatively low, there is a need for further research into lead exposure from ceramic ware.

With climate change intensifying heat waves, adopting a warning system based on the risk of adverse health impacts could significantly reduce heat-related deaths and illnesses by providing timely alerts.

E&HRU led a study that analysed mortality and temperature data from 1997 to 2013. The study revealed that maximum daily temperatures significantly influenced mortality rates with the risk varying by district due to the country's diverse climatic zones. This provided evidence to support focusing on localised temperature thresholds to better predict heat-related health risks. The climate crisis can fuel the risk of pandemics. A key response is supported by the SAMRC Wastewater Surveillance and Research Programme (WSARP) made up of three SAMRC units namely E&HRU, Biomedical Research and Innovation Platform and the Genomics Platform. SAMRC WSARP is currently working on a multi-pathogen panel as an early warning system, underscoring the importance of proactive measures in safeguarding public health.

Equitable capacity development for empowering communities

Within E&HRU, we prioritise capacity strengthening to support staff, students, and communities. Our E&HRU staff are actively involved with various initiatives providing student supervision and mentorship to over 10 local institutions. At a recent climate adaptation conference, E&HRU staff and collaborators embarked on a Q-Storming session to gather expertise to discuss integrating health into African climate policies, thereby strengthening capacity. Topics included infectious diseases, government capacity and research usability. Innovative approaches like Q-Storming can facilitate this integration and build the capacity needed for climate-resilient health systems. In celebration of Youth Month in June, the E&HRU participated in the GenS Job Shadowing Programme. The E&HRU team demonstrated different technology and equipment used to test water quality. During fieldwork, the importance of rivers and estuaries for environmental and public health was highlighted. The team was pleased that perceptions around scientific research and creating a safe and healthy environment were reshaped through this event.

Science for creating a healthier society

The E&HRU continues to transcend the confines of laboratory and academic research to actively engage with communities, bridging the gap between science

and the public. Representing E&HRU, Dr Tracey Laban attended community feedback sessions in Bushbuckridge, Soweto for the LEAP-Epi project. Health impacts attributable to household air pollution were raised. Project findings were also shared with the study participants and other key stakeholders. Dr Laban discussed air pollution effects and addressed community concerns with practical advice to reduce household air pollution, emphasising the general lack of accurate exposure data in South Africa. The E&HRU team recently visited the USINGA South African Population Research Infrastructure Network node in Durban to explore potential collaborations within the Umlazi community. During the visit, the SAPRIN team shared insights about the USINGA project's initiatives in the on-going work at the Umlazi community, which emphasised the importance of community engagement in research. The 2023 South African Science Forum showcased the role that science, technology and innovation play in society. E&HRU senior Scientist, Mr Sizwe Nkambule, ran an exhibition stand showcasing wastewater-based epidemiology as an early warning system, also showcasing the interactive, public-facing dashboard developed by E&HRU during COVID-19.

Concerns about our changing environment are growing globally. The One Health approach integrates environmental, animal and human health, ensuring the well-being of our shared environment. In conjunction with World Environmental Health Day, the E&HRU collaborated with the University of Johannesburg (UJ) in hosting a seminar. The event explored Chemical Exposures, Air Pollution, Climate Change and One Health advancements.

In celebration of 30 years of democracy in South Africa

The E&HRU works tirelessly toward understanding and addressing the complex interplay between environmental factors and human health outcomes, particularly in marginalised communities. Our commitment is to foster sustainable development that prioritises the well-being of South Africans, regardless of socio-economic status or geographic location. We remain steadfast in conducting innovative research and advocate for evidence-informed policies.

In commemorating 30 years of democracy, we recognise the progress made thus far and acknowledge the challenges that lie ahead. We are committed to leveraging our expertise and partnerships to tackle emerging environmental health threats, mitigate existing disparities and build a resilient and equitable future. Together, we will continue to strive for a South Africa where every individual has access to clean air, safe water and a healthy environment, thus realising the full promise of democracy for all.

Hypertension and Cardiovascular Disease Research Unit

Unit director:
Prof. Marlien Pieters

Prioritising responsive research through impactful interventions

The overall aim of the Extramural Unit for Hypertension and Cardiovascular (CVD) Disease Research is to contribute to new clinical and epidemiological knowledge within the field of CVD risk in different population groups in South Africa to alleviate the CVD burden by facilitating more effective awareness, treatment, and prevention programmes in the future.

We use the latest technology such as polyomics and advanced cardiovascular phenotyping in prospective epidemiological as well as implementation research projects. We aim to contribute to the original cardiovascular profiling of all South Africans. With a shift from addressing mainly CVD in the elderly, the unit has initiated strategies to focus on preventive cardiology, namely; to focus on the early development of CVD risk factors such as raised blood pressure and early vascular ageing in children and young adults; to focus on the unique disease profile of a large proportion of South Africans affected by co-morbidities in terms of HIV and CVD and; to address the health implications of the high burden of CVD due to poor awareness and late diagnosis. This enables us to generate new knowledge across the disease spectrum, from early patho-physiological changes to advanced stages of CVD development. Our contributions of novel data and analyses in research publications aim to contribute towards better population-based CVD prevention, as well as better treatment and care for South Africans.

Equitable capacity development for empowering communities

Our staff complement has shifted towards a young generation of researchers, including more women and staff members from previously disadvantaged groups. These individuals are empowered to lead research projects within the EMU by support provided for research visits to leading international research laboratories to further their training and to gain the necessary skills to become experts in their research fields. The North-West University has a "Grow-Our-Own-Timber" initiative that provides funding to previously disadvantaged students to complete their post-graduate studies while receiving mentoring to fast-track them for permanent appointment, particularly in cases where current staff members retire. An example of such an appointment is Dr Gontse Mokwatsi who was appointed after the retirement of another senior staff member and who is already the project leader of the UPRIGHT-HTM study within the EMU.

Lastly, a concerted effort is made on succession planning for individuals from previously disadvantaged groups. This includes such members forming part of the management team meetings of the EMU, principal investigator positions in EMU research projects, attendance of management and leadership courses, development of national and international networks and access to research funding.

Science for creating a healthier society

We strive to connect with the community by visiting community members at their homes and workplaces, visiting young research participants in schools and staying connected via social media. The EMU has several outreach activities in the community. For example, a cartoon-type booklet has been developed to teach children on how a healthy lifestyle can protect against CVD. These are handed out to schools and clinics in the region. Another example is a comic strip that has been designed to teach the general public the importance of salt reduction for blood pressure regulation. In addition, many unit members and post-graduate students are closely involved in the global project on raising awareness of hypertension (May Measurement Month), resulting in the largest-ever global campaign for any risk factor.

EMU members also interact with the media (online, print, radio, television) continuously to both inform the public regarding general aspects of a healthy diet, raised blood pressure/hypertension and CVD, and to translate our research findings to the general public and other stakeholders. Members of the EMU are senior authors on authoritative guideline documents of relevant international societies, which guide the practical treatment of hypertension by clinicians and health care workers, with a special focus on application in developing countries.

In celebration of 30 years of democracy in South Africa

As an SAMRC EMU we are committed to promoting and contributing to the health and well-being of all South Africans, through alleviating the CVD burden of South Africans. By identifying more effective and sensitive screening indicators, predictors or targets for implementation we endeavour to improve population-based CVD awareness, prevention, treatment and care for all South Africans.

Understanding the difference in CVD aetiology amongst the different population groups in South Africa is an important step in reducing inequalities in health in SA and developing evidence-based targets for race-specific/sensitive CVD prevention. Additionally, understanding the interaction between lifestyle factors specific to the different South African population groups and CVD progression (alterations in vascular structure and function) aids in the identification of modifiable practices and thus constitutes the focus of our research.

These practices should be tailor-made to the South African context e.g. taking cultural diversity into account; making use of locally available foods affordable to the broader public; considering the specific genetic and epigenetic make-up of the different South African population groups and taking the co-existence of infectious diseases and the metabolic sequelae of their treatment into account.

The ultimate aim of our research is to contribute to a decreased prevalence of NCDs and, more specifically, CVD through engaging with relevant industry and clinical partners and contributing to health policy and practice, e.g., the rollout of evidence-based education programmes and prevention strategies, and also as part of the Primary Healthcare Services of the new National Health Insurance.

Masculinity and Health Research Unit

Unit director:
Prof. Ashley van Niekerk

Prioritising responsive research through impactful interventions

Masculinity and Health Research Unit (MaHRU)'s focus is in recognition of the disproportionate involvement of boys and men in injury and violence as victims and perpetrators, their more limited use of healthcare than women, and their shorter life expectancy. MaHRU's overall objective is to host research that contributes towards understanding the contribution of boys, men, and masculinities in health, and how best to engage men and boys toward improved health outcomes. The unit's research seeks to contribute to the prevention of violence and injury, specifically through (1) studies on the key risks, determinants, and protectors against injury and violence where boys and men are involved or implicated; (2) the development of methodological tools to assess such injury and violence prevalence; (3) studies on prevention interventions; and (4) the mobilisation of empirical support to enable safety policy. The key research enactments in 2023 were realised through the expansion of MaHRU's injury mortality surveillance system, consolidation of its community safety instrument research, full implementation of the violence and injury prevention studies, and implementation of community engagement activities.

MaHRU produced peer-reviewed journal articles in a range of national, continental, and international journals, book chapters and a book. The influence of MaHRU is also indicated in several invited editorials or commentaries, several technical reports, policy-related technical standards initiated, and through a significant number of keynote and invited presentations. MaHRU staff have been recognised by a range of science and discipline-specific organisations. Dr Kimemia served on the South African Bureau of Standards Technical Committee on Domestic Solid and Liquid Fuelled and the Appliances and the SABS Working Group on

MaHRU and the Limpopo Forensic Pathology Services collaborating on an injury prevention workshop discussing the next steps in injury prevention priorities

A violence prevention campaign held in Strand community, Western Cape. The event was followed by a peace walk.

Paraffin Stove Standards, and Professor Van Niekerk joined the Africa CDC Advisory Board: Technical Project Team on the Development of the Africa CDC Guidance Document on NCD, Injuries and Mental Health Surveillance System Strengthening.

Equitable capacity development for empowering communities

During the reporting period, staff members were supported through direct supervision and mentorship to obtain their postgraduate qualifications and as of March 2024, all of the permanent MaHRU research staff had obtained their doctoral degrees. This represents a cohort of researchers who make substantial contributions towards niche research, postgraduate training, and scientific and organisational leadership. In addition to the notable growth in staff postgraduate qualifications, 4 research masters' students were supervised to complete their internships. MaHRU's postgraduate training and mentorship have also grown substantially. Currently, the senior team is supporting an internally located cohort of 8 doctoral students, as well as an externally located cohort of 24 postgraduate students (9 masters; 15 doctoral). For 2023/2024, there are 4 psychology research masters interns working in MaHRU. Postgraduate training includes the provision of dedicated support for postgraduate students and postdoctoral fellows, writing retreats, and conceptual and methodological training. MaHRU has also been productive in providing a range of training courses to diverse stakeholders intended to grow and deepen violence and injury prevention research and strengthen safety and peace promotion interventions, policy, and research capacities.

Science for creating a healthier society

MaHRU places an emphasis on research that may be mobilised by communities, social advocates and policymakers to enhance community safety. For the reporting year, MaHRU prioritised translation especially of its burns and safe energy initiatives. Launched in 2021, the No Paraffin! Campaign focuses on the promotion of energy justice, especially for marginalised communities, recognising the challenges experienced with the domestic use of paraffin, especially in informal, minimally protected settings and advocates for an expedited transition to safe, affordable and modern energy technologies in impoverished settings, and encourages the gradual elimination of paraffin as a domestic fuel in South African communities, and for the protection of users in the interim. During 2023, the Campaign expedited its call to the South African government to implement policy and regulatory measures to protect the public while paraffin is still in use. MaHRU submitted a proposal to the South African Bureau of Standards (SABS) to review the current paraffin stove standard (SANS1906) to improve appliance safety. A second proposal for the inclusion of a denaturant (bitterant) and a colourant to paraffin to reduce poisoning incidents was also submitted to another SABS committee on paraffin fuels (SABS/TC 0028/SC 03). With regards to the injury mortality surveillance system, Department of Health officials and data collectors received training on ethical data management practices and the capturing, collating and generation of injury mortality reports to monitor unique injury profile occurrences.

In celebration of 30 years of democracy in South Africa

We celebrate the social struggles and achievements of South Africans over the last 30 years and look to the future with a strengthened commitment to the generation of humanising and healing knowledges, advancement of socially transformative practices, nurturing of next-generation cohorts, and the cultivation of solidarities aimed at fostering societal impact and catalysing social transformation and change in South Africa and further afield.

Mental Health, Alcohol, Substance Use and Tobacco Research Unit

Unit director:
Prof. Charles Parry

Prioritising responsive research through impactful interventions

The Mental Health, Alcohol, Substance Use and Tobacco Research Unit (MASTRU) aims to conduct and facilitate rigorous scientific research to inform policy, healthcare services, and interventions that promote mental health and/or reduce harmful substance use. We currently have 34 active projects, in the following areas:

(1) Epidemiology and surveillance of mental disorders, substance use, tobacco use and associated problems. For example, the South African Community Epidemiology Network on Drug Use (SACENDU) is a longstanding project to gather reliable and timely data to inform drug and alcohol policy decisions, prevention efforts, and treatment strategies. (2) Intervention development, piloting and evaluation. This includes the testing of novel digital interventions to close the mental health treatment gap and the use of machine learning to formulate treatment prediction algorithms within a precision medicine framework. In another project, a motivational interviewing/problem-solving therapy intervention was found to significantly reduce drinking levels in HIV-infected patients on antiretroviral therapy. (3) Intersection of substance use and mental health with other social problems (e.g. sexual violence), infectious diseases (e.g. TB, HIV), NCDs, and environmental issues (e.g. extreme weather). One example is a project focusing on the transmission of TB among people who use illicit drugs, which found that People Who Smoked Drugs (PWSD) had a higher bacterial burden than persons who did not. Screening for TB among PWSD in the community may facilitate earlier linkage to TB treatment and reduce community transmission. (4) Instrument development and validation to assess mental health and substance use. One example is a project using AI to develop efficient and valid instruments to screen for a wide range of childhood and adolescent mental disorders. Another example is a project to validate alcohol diagnostic tools to assess the role of alcohol use in injury-related trauma.

Equitable capacity development for empowering communities

MASTRU has several internal capacity development initiatives for staff including journal club meetings, staff training on research methods, and supporting people to attend conferences. Collectively, our staff are also currently supervising 29 masters and PhD students, of which 17 are female and 23 are black. We graduated 9 students in the last financial year and provided 12-month internships for 3 research psychologists, thus directly contributing to the ongoing development of the next generation of mental health and substance use researchers. Our staff also lecture in post graduate programmes at a number of universities, including in public mental health masters degree and psychiatry masters degree programmes. As part of our South African Community Epidemiology Network on Drug Use (SACENDU) project we also held regular stakeholder engagement and research uptake and evidence-based information sharing sessions. These sessions provide key input on trends in substance use and best practice in the treatment and management of substance use. We also implemented a number of projects (such as our project focused on TB transmission among people wo use illicit drugs) which aims to link people to care and to close the treatment gap for substance use and mental health problems, thus directly promoting the dignity of

South Africans by promoting the right to accessible, acceptable and affordable healthcare.

We have also actively used the epidemiological data we collected to advocate for policies, resources and appropriate legislation to curb the harmful effects of substance use and promote mental wellbeing of all South Africans. Our staff also developed, implemented a Psychological First Aid training module for medical undergraduate students, thus promoting the capacity of doctors to deliver psychological first aid in emergencies.

Science for creating a healthier society

MASTRU staff presented research findings to the media in 2023/24 through over 40 interviews covering of topics including alcohol use and harm, adolescent cannabis use, and tobacco legislation. The results of the Psychosocial Rehabilitation & Peer Support for People with Schizophrenia in South Africa (PRIZE) study were presented to the Nelson Mandela Bay District Department of Health and feedback given to the Western Cape Department of Health on links between alcohol and TB. The Alcohol Diagnostic Validation for Injury-Related Trauma (AVIRT) study held a seminar at Mitchell's Plain District hospital to provide feedback to stakeholders. We provided inputs at various levels to policy development. At a provincial level we made submissions on the Western Cape Minimum Unit Pricing policy and provincial liquor licensing fees. Nationally we gave input in the legislative process for the Tobacco Products and Electronic Delivery Systems Control Bill, the Department of Social Development's substance disorders policy and cannabis position paper, the Department of Health's foodstuffs labelling regulations and to Parliament (National Council of Provinces) on the Road Traffic Amendment Bill. Internationally, we made submissions on alcohol policy reform in Kenya, drug abuse trends in South Africa for inclusion in the UN World Drug Report, and on synthetic drug monitoring as part of the Global Coalition to address Synthetic Drug Threats. We also provided input to the WHO guidelines on media reporting of suicides, participated in the Lancet commission on problematic internet use, and gave input on the WHO guidelines for Mental Health in the Workplace.

In celebration of 30 years of democracy in South Africa

Through research and the translation of research, MASTRU is committed to better understanding the burden of mental health and substance use on society and how best to reduce this burden to support the optimal development of our human capital and use of the country's resources.

We also reaffirm our commitment to ensuring that all South Africans have access to acceptable, affordable, and evidence-based treatments for substance use and mental health problems. Furthermore, the unit is dedicated to empowering young individuals pursuing research careers in psychology and public health, particularly those historically marginalised or impacted by the remnants of the apartheid era, in the field of research science. We intend to build capacity, equipping them with the necessary tools, knowledge, and opportunities to excel in scientific inquiry in the mental health and substance use disorder fields.

The two Peer Advisory Board groups.

Microbial Water Quality Monitoring Research Unit

Unit director:
Prof. Anthony Okoh

Prioritising responsive research through impactful interventions

The main goal of our EMU is to strive to be a highly profitable Centre of Excellence for the development of the next generation of microbial water resource specialists and to be *primus inter pares* in offering solutions to the myriad of water quality challenges in South Africa and beyond. This mandate is driven by the serious problem of shortage of skilled manpower in the water and sanitation sectors especially amongst previously disadvantaged demographic groups in South Africa, and our research is mainly directed at finding solutions to this reality through primarily addressing the myriad of challenges in the water and sanitation sector in the Eastern Cape Province (ECP). Within the overarching aim of our research initiatives which is "evaluating some key emerging challenges in microbial water quality and safety as a vehicle for skills and capacity development in water science, especially amongst the previously disadvantages demographic groups in the Province". The projects that we undertook during the current cycle are summarised as follows:

(1) Wastewater treatment and quality indices of water resources and emerging challenges in the water sector. (2) Antimicrobial resistance in the water-plant-food public health interface, (3) Chemical pollutants in the aquatic environment and development of innovative nanomaterials for use in their removal from water/wastewater, (4) SAMRC

Microbial Water Quality Monitoring team collecting samples at the Buffalo River estuary in East London.

national wastewater coronavirus surveillance team, and (5) New bioactive compounds of health and biotechnological importance. Data collected in these projects have been published and resulted in over 25 journal articles.

Equitable capacity development for empowering communities

Our EMU has been a veritable hub for capacity development, especially amongst previously disadvantaged demographic groups in the country. Indeed, during the reporting period, we have trained 12 doctoral and 13 masters students. Of the doctoral students, 8 were females, while 4 were males; and of the masters students, 9 were females while 4 were males, which is consistent with the national agenda of empowerment of the female gender. Ten Honours students made up of 9 females and 1 male, all South Africans are also undergoing training in this cycle. About 80% of all these students are black South Africans.

Science for creating a healthier society

Our unit publishes its research findings in reputable journals as well as at national and international conferences during the reporting period. Indeed, this has helped our EMU maintain its status as the most productive research entity at the University of Fort Hare since the review conducted by the University in 2022 on all centres, units and institutes at the University. I am pleased to remark that we have sustained this record since the creation of our EMU in 2015 to date.

In celebration of 30 years of democracy in South Africa

South Africa is a water-scarce country with sizeable regional disparities in access to piped water and with a large proportion of the population having to depend on other sources of water, including surface and underground water sources for their domestic, agricultural, recreational and other needs. These water bodies are vulnerable to pollution from various sources resulting in key water, sanitation and public health challenges. Also, the shortage of skills in the water and sanitation sectors remains a challenge in South Africa that deserves attention in line with the objectives of the National Water Act, 1998 (Act No. 36 of 1998), and both the White Paper on Science and Technology; and the National Research and Development Strategy which recognises that South Africa is in a state of "frozen demographics" with respect to skills and capacity development in S&T especially amongst previously disadvantaged demographic groups in the country.

Our work, especially in the Eastern Cape Province, which is mainly rural, and the reality that our students are mainly from the previously disadvantaged demographic groups speaks to these strategies. Also, is the government's goal of addressing the triple challenges of reduction of poverty, unemployment and inequality in the country. In this regard, several students have been trained and attained higher degree qualifications from projects in our EMU, which makes them competitive in the job market. All graduates from our EMU have gained employment or pursuing higher degrees and thus have assisted in breaking the shackles of poverty in their families.

Microbial Water Quality Monitoring Research Unit on a research visit to the United Arab Emirates in 2023.

Non-Communicable Diseases Research Unit

Unit director:
Prof. Andre Kengne

Prioritising responsive research through impactful interventions

During 2023/24 the Non-Communicable Diseases Research Unit (NCDRU) played major roles in over 20 research projects addressing Cardiometabolic Diseases (CMD), Chronic Kidney Disease (CKD) and determinants of Non-Communicable Diseases (NCD) at large. Adherence in adults attending HIV treatment (MOPHADHIV) trial, we are testing the effect of text messaging on the uptake and adherence to hypertension medications in people with HIV. We completed the enrolment of 700 participants; their follow-up will be completed in November 2024. In another project on people with HIV, the unit has continued to explore novel strategies to promote combustible cigarette cessation in this population, completing the formative work toward a clinical trial to start soon. Across our South African Diabetes Prevention Programs (DPP) taking place in Western Cape and Eastern Cape, we have continued community-based diabetes risk screening and started the intervention in Cape Town. This consists of socio-behavioural counselling targeting changes in lifestyles to reduce the risk of developing diabetes.

In the CKD Africa Collaboration project, we have successfully enrolled 50 studies with over 90,000 participants from 13 African countries. Analysis over time will contribute to improving the epidemiology of CKD in Africa. Our Food-SAMSA project is investigating the role of food environment in promoting the development of NCDs in Africa. The project completed the investigation of food environment in South African townships and liaised with a range of stakeholders to maximise practical and policy impact of the research. In the growth patterns and societal cultural beliefs and practices in Dikgale (Limpopo Province) project, we have assessed the nutritional status and growth patterns of learners and maternal factors influencing those growth patterns and explored the influence of cultural beliefs and practices of mothers on the nutrition and growth of the children.

Equitable capacity development for empowering communities

The NCDRU has established a young scientists forum where young scientists (masters', PhD, postdoctoral fellows and junior scientists) meet monthly to engage on various topics, both scientific and "soft skills", aimed at career and personal development. Moreover, it is a safe space to share and support all members. This forum is driven by three senior scientists and a postdoctoral fellow. NCDRU has continuous training for all staff and fieldworkers working on various projects. Refresher training, including anthropometrics and BP measurements, are offered on a quarterly basis and training related to specific methods are done on an ongoing needs basis i.e. GPAQ and dietary intake training.

Science for creating a healthier society

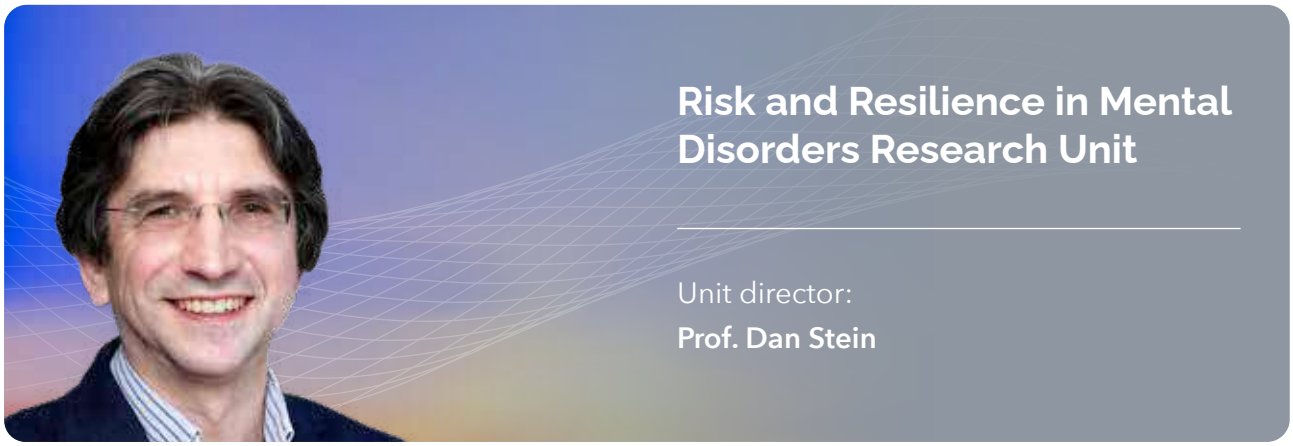
As part of the FoodSAMSA project, there is a partnership with community health workers called

Group Model Building (GMB). GMB is a participatory approach whereby diverse stakeholders share their views about a problem to create a collective understanding of a complex system. Our engagements aim to arrive at and depict (common) drivers of the syndemic of malnutrition from diverse perspectives and leverage points for action. Our process included conducting focus group discussions and depth interviews with stakeholders, after which we did an initial round of coding before inviting the stakeholders back to share the findings and engage them to build the models with us. The CHW found the exercise empowering and uplifting and gave the scientist interesting perspectives and key leverage points for intervention.

In celebration of 30 years of democracy in South Africa

Throughout the first three decades of democracy, NCDs have firmly assumed the leading position in terms of contribution to deaths in the country, against a background of non-optimal prevention and control interventions. Government and society need to move the country toward achieving its commitment of substantially reducing premature mortality from NCDs. NCDRU will continue to contribute to these efforts by generating reliable evidence to characterise the burden, determinants and trends of major NCDs in the country and region, but also to inform policy and actions to improve the detection, prevention and control of common NCDs.

SAMRC Wellness day offering various tests and valuable wellbeing information to staff including identifying potential health risks.



Risk and Resilience in Mental Disorders Research Unit

Unit director:
Prof. Dan Stein

Prioritising responsive research through impactful interventions

Our work in the SAMRC Unit on Risk & Resilience in Mental Disorders focuses on mental health. There is growing awareness of the high prevalence and costs of mental health conditions; these conditions contribute to a significant proportion of the global and local burden of disease. Furthermore, as we successfully combat infectious diseases, so we can expect that the contribution of non-communicable diseases, including mental disorders, will continue to increase. There is also an important need to transform health services to address mental disorders. Our work contributes to generating new knowledge in this area, to technology development, to building capacity, and to translating research into policy and practice, in this area.

Our work ranges from basic neuroscience, on to clinical research, and from there to epidemiological and public mental health studies; that is from bench to bedside, and from the clinic to the community. Our research is diverse, ranging from contributions to nosology and epidemiology, to brain imaging and neurogenetics, and on to cohort studies and clinical trials. This diverse portfolio is appropriate, given our focus on building knowledge, technology, and capacity, in order to transform services. To elevate the quality of our work, we also collaborate widely across the country, continent, and globe.

We advanced work on a number of projects during the reporting period. First, we continued our work on psychiatric epidemiology, continuing to analyse the country's first national survey of mental health among university students. The problem that this work seeks to address is that the prevalence of mental disorders in our local context seems to be increasing but has been poorly studied to date. Therefore, we undertook a thorough survey of universities across the country and brought the attention of universities to this data.

Equitable capacity development for empowering communities

Our unit has a strong focus on capacity development, with significant deployment of funds to support student fellowships. We are also keenly aware of the need for diverse researchers, that represent the local population, and strive to reach that profile.

First, this is increasingly seen in the profile of our students, postdoctoral fellows, and staff. Second, examination of the achievements of past mentees of the unit indicates that many black researchers who have been members of our unit are now national and international authorities in their own right (including experts in posttraumatic stress disorder, substance use disorders, neurogenetics, forensic psychiatry, mental health epidemiology).

Science for creating a healthier society

First, our Mental Health Information Centre continues to play a key role in translating our work to relevant stakeholders and the public. It does this through continuous liaison with the media, through taking direct calls from members of the public, and via its ongoing focus on increasing mental health literacy and decreasing stigmatisation of mental disorders.

Second, we work with the Western Cape Department of Health on several different projects, attempting to bring research outputs to services.

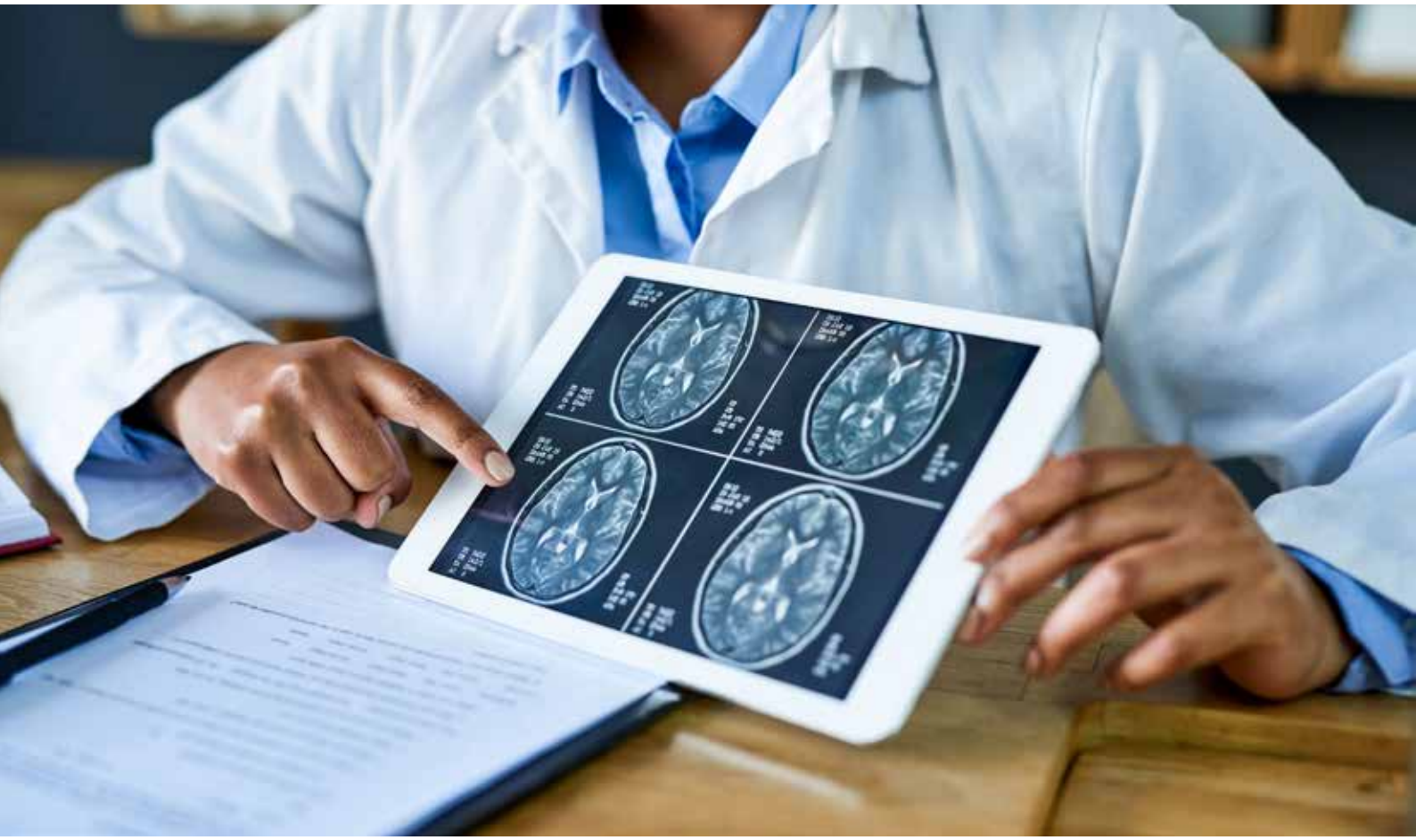
The Director of the unit plays a key role in mental health services in the province, as he is Head of the UCT's Department of Psychiatry, which is affiliated with Groote Schuur Hospital, Red Cross Children's Hospital, Valkenberg Hospital, and a range of other facilities. This means that he is in constant interaction with managers, administrators, and other stakeholders, and is able to continuously lobby for improving mental health services.

Third, we work with the National Department of Health on several issues, for example, in recent years we led the development of guidelines for medically assisted therapy for opioid dependence. We helped organise a national conference together with the National Department of Health in 2023, bringing together a broad range of stakeholders to try and find ways forward in mental health.

Fourth, we work with the World Health Organization on a number of projects, including classification and assessment of psychiatric disorders.

In celebration of 30 years of democracy in South Africa

Mental health is key for sustainable development!



Rural Public Health and Health Transition Research Unit

Unit director:
Prof. Stephen Tollman

Prioritising responsive research through impactful interventions

In partnership with host communities and local institutions, the unit aimed to better understand and respond to the dynamics of health, population and social transitions in rural South and sub-Saharan Africa, to mount a more effective public health, public sector and social response and thereby inform national, regional and global health and development policy and practice.

Unit research continued to address four fundamental questions during 2023/24: (1) Unpredictability and pace of rapidly evolving health, population, and social transitions, (2) Interacting social, environmental, behavioural, and biological determinants and consequences, highlighting vulnerability and resilience at key stages along the life course, (3) When, where and how to intervene effectively, and (4) Implications for health, social and developmental sector responses in order to achieve a more equitable and socially and economically productive society.

Studies across the life course included (i) an effective, scalable approach to addressing depressive symptoms in adolescents (DoBAT: Digital delivery of Behavioural Activation to overcome depression and facilitate social and economic transitions) and (ii) successful ageing among middle-aged and older rural-dwelling South Africans (HAALSI: Health and Ageing in Africa-Longitudinal Studies in an INDEPTH community). Social determinants work included MHFUS: Migration and Health Follow-Up Study involving comparative research on changing health burden, risk profile and support needs of labour migrants.

Field workers at ARK project.

Innovative health and social systems R&D involved (i) "Know your numbers" pilot trial, capitalising on older persons' monthly attendance in grant/pension queues to provide an identifiable, at-risk population and novel venue for Blood Pressure (BP) measurement and referral, and (ii) "Ntirhisano", training traditional healers in HIV testing and referral to local clinics. Strengthening service-community partnerships included "VAPAR: Verbal autopsy with participatory action research" which successfully enhanced agency of CHWs, and "MADIVA: Multimorbidity in Africa: digital innovation, visualisation, and application".

Work assessing excess mortality consequent on COVID-19 in sub-Saharan Africa and South Asia, has a special issue due out in 2024.

Equitable capacity development for empowering communities

Recognising the high unemployment of local youth, Agincourt runs a successful data intern programme, recruiting young graduates from the local area and providing them with practical experience and skills in development of data pipelines, data management, curation and storage, and data communications. Most progress to positions within the unit after the 6-month internship.

Digital skills training for local youth involved a 6 month 'Artificial Intelligence Machine learning' course for 15 unemployed youth from the Agincourt area run by CXI-Africa (Centre for Digital Transformation and Innovation Africa) in collaboration with SAMRC/ Wits-Agincourt and SANParks, funded by the Media, Information and Communication Technologies Sector Education and Training Authority (MICT SETA). Agincourt now has an MOU with MICT SETA for future training programmes.

Capacity building of community health workers through VAPAR (Verbal Autopsy with Participatory Action Research) focused on building CHW skills in community mobilisation through training in rapid Participatory Action Research (PAR), convening community groups, responding to local health concerns, and facilitating action in communities.

Following district request, in 2023 the project was disseminated across all 3 districts in Mpumalanga. Traditional healer training in HIV counselling and testing was conducted as part of the Ntirhisano study that aims to establish a model for traditional healer integration into the primary healthcare system. 15 traditional healers were formally trained in HIV counselling and testing as part of a successful pilot trial following which a full RCT has now been funded through the NIH with further training of a larger group of traditional healers anticipated.

In December 2023, Agincourt with the NGO goGoGogo, ran a workshop for grandparents in the study villages that taught digital skills on tablets donated by the SAMRC/Wits-Agincourt Unit. This aimed to provide skills for grandparents caring for children, to help them navigate the internet including access to educational platforms.

Field workers meeting outside Agincourt lab.

Data Sciences and Innovation Hub at the SAMRC/ Wits-Agincourt Research Centre, Bushbuckridge.

Collecting biomatric data in a household in the Agincourt study area.

Meeting of traditional healers in Welverkdiend village as part of Ntirhisano study.

Collecting survey data in a household in the Agincourt study area.

Science for creating a healthier society

The work of the unit rests on a population-based platform covering all living in >30 villages of Agincourt-Bushbuckridge, Mpumalanga – a whole population cohort (or health and sociodemographic surveillance system, a node of SAPRIN). The portfolio of observational and intervention research along the life course requires nurturing and sustaining of long-term respectful relationships with local host communities: ongoing feedback and dialogue are a constant feature.

Led by the unit's public engagement team, this involves biannual all-of-village meetings to discuss epi-demographic and study findings. These characterise the unit's commitment to enhanced community knowledge and understanding and involve recruitment of local field staff and building their capacity to conduct surveys reliably and manage data rigorously and ethically.

As research included anthropometry and biomarkers, the opportunity to share individual results became important, with a need to strengthen referral to local clinics and expert staff e.g. social workers, psychologists and specialist clinicians. To illustrate: (i) BP assessment was successfully trialled in older person grant queues (an SAMRC-Unit effort), (ii) Working with the US-based start-up, Variant Bio, a benefit-sharing approach, co-developed with local communities, was implemented. Initially, communities selected water storage (JoJo tanks in each village). Then, responding to educational priorities, technology options such as smartboards and projectors were contributed to local schools, along with generators, (iii) A novel effort, involved training of traditional healers in the use of PPE and HIV testing; now widely extended, and (iv) An R&D programme to strengthen agency of community health workers is being extended at the request of District and Province.

In celebration of 30 years of democracy in South Africa

We have been blessed to enjoy an exceptionally rewarding and enriching partnership with the SAMRC and Wits University. This partnership is the bedrock that secures our enduring commitment to health and development in rapidly changing rural settings of South and sub-Saharan Africa. Such environments, in the midst of complex, dynamic, often unfamiliar health and social transitions, face persisting structural challenges that profoundly compromise health and well-being along the life course.

Working with a breadth of stakeholders – including the SAMRC, sister research centres, local communities, and public, non-profit and private sectors – we contribute vital population-based data, coupled with evidence on impactful interventions, that are essential to policy, practice and programmes across multiple health, education, social and development sectors. In so doing, as part of ongoing efforts to bridge deep-seated inequalities, we will sustain and extend initiatives that strengthen the capacities of next-generation scientists, practitioners and research administrators, supporting them to thrive along their career paths and flourish in their professional roles.

MATERNAL, CHILD AND WOMENS HEALTH

RESEARCH PROGRAMME 2

PURPOSE OF THE PROGRAMME

To improve the health status and quality of life of women and children through high-quality scientific research that informs policy and practice, improves health services and promotes health.

UNITS THAT CONSTITUTE THIS PROGRAMME

1. Child and Adolescent Lung Health Research Unit (ERU)
2. Development Pathways for Health Research Unit (ERU)
3. Gender and Health Research Unit (IRU)
4. Maternal and Infant Health Care Strategies Research Unit (ERU)

PROGRAMME STRATEGIC OBJECTIVES

- To conduct and promote research for the improvement of maternal, child and women's health, while also making an impact on gender inequity and gender-based violence (GBV).
- To train and mentor high calibre postgraduate students in the field of maternal, child and women's health.
- To synthesise evidence, optimise information and knowledge flow, influence policy and practice within the health sector and other sectors of government in relation to issues affecting maternal, child and women's health.
- To develop interventions for prevention of gender-based violence for testing and evaluation of effectiveness in affected communities.
- To test or evaluate interventions (programmes) to prevent GBV and reduce maternal and neonatal deaths in primary and secondary levels of care.

RESEARCH HIGHLIGHTS UNDER THIS PROGRAMME

Prioritising responsive research through impactful interventions

The Child and Adolescent Lung Health Research Unit has focused on the following areas in child health: (1) developmental origins of child health in an established birth cohort study (the Drakenstein Child Health study), and the association of early life exposures with the emergence of non-communicable diseases (2) childhood TB focused on strategies to improve timely diagnosis and treatment (3) childhood pneumonia with epidemiological, aetiological and long term outcome studies as well as clinical trials studies of new RSV preventive interventions to prevent RSV-disease in infants (4) a randomised controlled trial of a novel way of delivering surfactant with nebulisation, for treatment of lung disease of prematurity (5) determinants of illness and spectrum of disease in a longitudinal cohort study of adolescents living with HIV who are well established on ART (Cape Town Adolescent antiretroviral cohort), with a focus on development of sub-clinical cardiac impairment.

These studies have produced data that has impacted on clinical guidelines and informed potential new interventions and policies e.g. WHO guidelines and revised SA guidelines for TB diagnosis in children; data on the efficacy of new RSV preventive interventions in infants has contributed to global implementation in several countries and is currently under consideration in SA.

Equitable capacity development for empowering communities

Unit staff have been involved in building capacity at local, regional, and international recruitment sites in the field of childhood tuberculosis diagnostics. Research team members have trained District nursing and medical staff across Cape Town, in Uganda and in Mozambique on strengthened strategies for diagnosis in children. Community engagement activities in the DCHS have involved engaging with the local school on a project to repaint the school including a beautiful mural, in which school children participated to create. A video on lung health in young children was produced with a focus on lung function. Engagement with mothers and children also focused on the consequences of being born premature and factors that can promote health. An educational pamphlet on preventing pre-term birth and on factors to strengthen health in premature babies was produced and widely disseminated. The 10-year anniversary of DCHS was celebrated with community engagement initiatives and messages that promote child health and cognitive development.

Science for creating a healthier society

By conducting clinical and laboratory trainings, the unit has been involved in developing skills of laboratory and clinical staff in lower resource

settings locally, regionally, and internationally. The results of these trainings have been the effective empowerment of clinical teams entering into the paediatric research space establishing cohort studies and by ensuring consistency of clinical procedures across multi-country consortiums.

Within the DCHS, staff planned two public engagement events to provide relevant feedback on lung health outcomes to families of children born pre-term. Over 110 families attended across the study sites and included feedback including i) findings from the study; ii) education on pre-term birth and lung development; and iii) discussion on the long-term risks for lung health in pre-term babies. The mode of communication was made appropriate and accessible by all attendees and included information communicated in the language preference of the family groups. The sessions were interactive and encouraged families to share and ask questions about their children's health. Following the session, attendees were encouraged to provide feedback to the staff organisers to enable them to tailor feedback sessions in the future.

In celebration of 30 years of democracy in South Africa

The unit is committed to doing cutting-edge research that develops strengthened strategies for child health in major areas of burden in low and middle-income countries. The unit is focused on developing better preventive, diagnostic and management strategies for children with the greatest need, to promote equity in child health globally. The unit is also committed to capacity development in Africa so as to train and mentor the next generation of African leaders in child health.

Child and Adolescent Lung Health Research Unit attending the Induced Sputum Training.

Children at the Langabuya Primary School, Paarl, Western Cape.

Development Pathways for Research Unit

Unit director:
Prof. Shane Norris

Prioritising responsive research through impactful interventions

The Development Pathways for Health Research Unit (DPHRU) aims to elucidate important pathways to health and development in these areas: (1) maternal and child health and nutrition, (2) growth, psychosocial and physical development, and (3) obesity and non-communicable disease (NCD) risk in South Africa.

To address area (1) we are currently conducting a randomised clinical trial (RCT) to improve women's physical and mental health preconception and for those who become pregnant a continuum of care intervention to improve pregnancy and child health and development outcomes. For area (2) we are conducting a RCT in rural and urban South Africa to address the triple burden of malnutrition (under- or over-weight and micronutrient deficiencies) in adolescent girls. For area (3) we are implementing a RCT that aims to reduce hypertension risk through a household salt substitute which has less sodium and is enriched with potassium. The key impact is that we have demonstrated a complex multi-morbidity burden with young people and ageing adults and the need for life course prevention studies and that community health workers may be an important change agent to support prevention of NCDs in South Africa.

Equitable capacity development for empowering communities

DPHRU supported 30 postgraduate and postdoctoral fellows in 2023/24 and is committed to strongly developing the next generation of scientists. In addition, we have embarked on several implementation science projects working with the Soweto community and stakeholders. One such initiative is the Wits Health Hubb, led by Dr Lisa Ware, in Soweto and recruited another group of youth who were not in employment, education or training (NEET). To date, there have been 95 NEET youth who have been trained as community health workers on this programme and who supported over 80,000 community members with basic health checks and referral to care, also contributing to over 3,000 participants' blood pressure data from Soweto to the Global May Measurement Month campaign in 2023. A new initiative, led by Professor Shane Norris, is an implementation science prototype (Brain Gym) aimed to address a critical need of youth depression and anxiety. The new Brain Gym prototype has been built and installed at DPHRU and currently collecting implementation science data on a first-phase response/service to young people with depression, anxiety or suicidal ideation.

Science for creating a healthier society

The unit's work on early childhood development, led by Assistant Professor Catherine Draper, has specifically been community-based, in partnership with non-governmental/not-for-profit organisations focused on early childhood development in low-income urban and rural communities. This work has involved events to provide feedback to these organisations, in addition to feedback provided to participants (caregivers of young children), and has also involved the co-design of a digital tool with organisation representatives (community-based workers) to promote early childhood development and well-being. The feedback from these types of

engagements has confirmed that such engagements can help to shift the power asymmetries between researchers, and community-based organisations and communities. These learnings were captured in a publication in the Journal of Cognition and Development.

Our work with colleagues from the University of Leicester and the SAMRC Environment and Health Research Unit (LEAP-Epi – Environmental Health in sub-Saharan African: Leveraging local and global Air pollution data for Epidemiological research) included the co-development of information resources with community advisory groups to understand the causes of indoor air pollution during summer and winter. This included the feedback of actual data from low-cost indoor air quality sensors which had been deployed as part of a campaign to inform effective exposure assessment field work.

In celebration of 30 years of democracy in South Africa

While South Africa celebrates 30 years of democracy, we are aware that wide inequities still exist, and that a range of structural factors continue to compromise the health and well-being of South Africans across the life course, most especially in low-income communities. As a unit, we are committed to conducting research using a range of methodologies that develops not only our scientific understanding of the health and well-being of individuals in these communities, but also their lived experiences. We intend to provide a diversity of scientific evidence that can contribute to the development of solutions to the challenges still present in South Africa.

Gender and Health Research Unit

Unit director:
Prof. Naeemah Abrahams

Prioritising responsive research through impactful interventions

The Gender and Health Research Unit (GHRU) continued contributing evidence to deepen global understandings of the drivers of gender-based violence (GBV) including the impact of extreme weather events, stigma and common mental disorders and HIV/AIDS. We have advanced knowledge of GBV prevention, through co-development and piloting of mental health and GBV interventions with several different target groups.

The unit's research exploring the gendered impacts of the 2022 floods on gender relations, mental health, and violence in Ethekwini showed that the powerful floods caused considerable damage to housing, infrastructure, income, and loss of lives. Women bore a greater burden than men of post-flood recovery tasks and caring for families. Men's ability to fulfil traditional provider roles diminished due to job losses and damaged homes, leading to frustration and in some cases, increased violence against partners. We found that women who were exposed to higher levels of pre-flood trauma and had more food insecurity experienced higher levels of emotional distress.

We also conducted research with rape survivors and extended our knowledge of rape stigma, which is an important driver of post-rape PTSD. The study showed that feelings of shame, self-blame, and internalised stigma, are distinct, yet inter-connected. Internalised stigma was often driven by enacted external stigma. Survivors experienced external stigma from family, community members and service providers, with the degree depending on their relationship to the perpetrator. Stigma was fuelled by gender norms, rape myths and victim-blaming attitudes. The research highlights the need for improved post-rape care that considers the psychological impacts of stigma.

Our GBV intervention research has included studying the unit-developed intervention Ntombi Vimbela (NV!), which is a GBV intervention that has been developed for use with women in higher education. We assessed the impact among female students in HDIs at one-year post-baseline and showed that NV! reduced depressive symptoms and rape myth acceptance.

Equitable capacity development for empowering communities

GHRU staff participated in capacity development initiatives including research skills building and formal training courses. Research assistants were mentored and participated in research skills training for the full research process from design to writing an article. Vicarious trauma is commonly experienced by research staff who do gender-based violence research. We recognise this risk and assist staff by providing collective care and support to cope. In this year, our Durban-based staff attended formal training completing a 9-week training course through Lifeline on personal growth and emotional wellness. Our senior staff are also supported in building management skills and Prof Yandisa Sikweyiya completed the Management Development Programme through Stellenbosch University Graduate School of Business. This year the unit for the first time implemented the Competitive Seed Funding Initiative (CSFI) aimed to empower junior and emerging scientists in grant writing, research project management, financial management, and manuscript writing and publication. After a

competitive process which mimic external grant application processes, two staff members from the research management band were selected as successful candidates. As first-time PIs the two emerging scientists were allocated mentors and will use the projects to launch their PhD projects.

Our unit has used the co-development approach to adopt and implement the development of interventions in the two of our research projects this year. These are experienced as empowering for the participants involved in the process. The NV! flagship project and Siyaphambili project worked with a group of Black African lesbians, bisexual and queer women students enrolled in HDI University campuses, and with Young Peer Research Assistance (YPRAs) recruited from the community to develop combined mental health and violence prevention intervention, and an intervention to address the social contextual factors that create syndemics of health risks for young people living in informal settlements.

Science for creating a healthier society

The GHRU participated in several research translation activities, including translating our knowledge of femicide prevention into the Implementation Framework of the Integrated National Femicide Prevention Strategy, international and national conference presentations, webinars, and presentation of research findings to key stakeholders such as the Department of Health, and non-governmental organisations and community leaders. Moreover, the unit's multisectoral collaborations have positioned us to continue influencing the development, implementation and monitoring of national policies relating to GBVF.

As a member of the End GBVF Collective, the unit supported the National Strategic Plan on Gender Based Violence and Femicide's research and prevention pillars to achieve the Presidential Summit 2022 Resolutions. As developers of the Integrated National Femicide Prevention Strategy, GHRU was invited by the Department of Justice and Constitutional Development to contribute to the development of the implementation framework to articulate the approaches proposed for femicide prevention nationally.

Ntombi Vimbela! flagship project researchers.

As a member of the National Violence Prevention Forum (VPF), a multisectoral collaboration promoting evidence-based violence prevention, the GHRU also contributed to case study research to evaluate the sustainability of the VPF to close gaps between research, programmes and policy between and among sectors working on violence prevention.

The NV! team presented research findings on sexual violence prevention at higher education institutions at the inaugural National Mental Health Conference convened by the Department of Health. This work attracted extensive media coverage by news outlets, such as News24, Weekend Argus and Cape Town, and formed part of the Women's Month commemorations in August 2023.

In celebration of 30 years of democracy in South Africa

As South Africa continues with its efforts to address the quadruple burden of disease, including interpersonal violence, GBV research, GBV prevention, and responses to assist survivors are critical. With the research and prevention and response expertise the unit possesses, building on more than 30 years of experience conducting research and intervention development and evaluation, the GHRU is well positioned to lead the much-needed research and prevention and response work to address and

eradicate the scourge of gender-based violence and femicide (GBVF) in the country. In the next five years, the unit will build further knowledge on GBVF prevention by conducting intervention research to establish what works to prevent GBVF and how best to respond to it. This work will contribute toward achieving the goals of the National Strategic Plan on GBVF (NSPGBVF), and global Sustainable Development Goal 5.

Building on more than 30 years of experience, GHRU is well positioned to generate evidence and contribute toward achieving the goals of the National Strategic Plan on Gender-based violence and femicide and Global Sustainable Development Goal 5 by continuing to lead on epidemiological research, developing and evaluating GBVF prevention interventions and responses in the country.

Among the suite of studies within the unit, the Fediša Modikologo (End The Cycle) project is an innovative study that aims to understand the multiplicity of impacts of GBV on women and their families, including the intergenerational cycling of violence, and thus learn more about ways of ending the cycle. The research is set in the Waterberg in Limpopo.

The disability project team.

Workshop by Siyaphambili project aimed at co-developing intervention to address social factors that create syndemics of health risks for young people living in informal settlement.

Maternal and Infant Health Care Strategies Research Unit

Unit director:
Prof. Ute Feucht

Prioritising responsive research through impactful interventions

The final 24-month follow-up visits for the Siyakhula study took place in 2023/2024. This longitudinal study, comprising over 300 infants, investigated how maternal HIV infection and antiretroviral treatment affects growth and development throughout the infants' first 1000 days. Numerous research outputs are presently under development and it is anticipated that the research will give a more comprehensive understanding of the impact of maternal HIV infection on infant growth and development.

One important project in 2023/2024 was the implementation of the Umbiflow device across all primary health care clinics providing antenatal care in subdistricts 5, 6 & 7 within Tshwane District. It is expected that the intervention will reduce the stillbirth rate in these districts. If successful, the implications are that the high incidence of stillbirths observed in South Africa could be lowered.

The unit's commitment is to provide relevant solutions for some of South Africa's challenges in maternal, newborn and child health care.

Another ground-breaking research project is underway, involving a novel point-of-care test for neonatal sepsis, currently being piloted in 40 infants. Successful validation of the test would enable prompt identification of neonatal sepsis and enable timeous treatment, while minimising the unnecessary administration of antibiotics to non-septic infants.

Sharing our experiences in neonatal care has been another highlight in 2023/2024, as a team of paediatricians and nurses have embarked on a project to strengthen neonatal care in eSwatini.

Equitable capacity development for empowering communities

Capacity development initiatives primarily include the active involvement of our many postgraduate students, who are empowered to contribute to our research activities. Our participants are mostly recruited from the public healthcare system, enabling our students to engage directly with the community and uphold the principles of equity and dignity in healthcare. Furthermore, our studies often extend additional services to the participants, beyond routine care, further enhancing the quality of healthcare delivery.

The routine use of Umbiflow, an innovative South African invention, in several subdistricts in Tshwane during 2023/2024 represents a significant step towards community empowerment and the advancement of equity and dignity within health research. By facilitating the detection of placental insufficiency during pregnancy at primary healthcare facilities, where the majority of South Africans receive their antenatal care, this technology has brought transformative antenatal care to many

The routine use of Umbiflow in several subdistricts in Tshwane represents a significant step towards the advancement of equity and dignity within health.

South Africans. Historically, access to ultrasound at primary healthcare level has been very limited. The capability of the Umbiflow device to detect placental insufficiency, a leading contributor to fetal growth restriction and stillbirths, is of great significance, especially in light of South Africa's elevated stillbirth rate. This ground-breaking cost-effective tool, which has been proven to reduce stillbirths, can be operated by any healthcare professional, with training achievable in 1-2 weeks.

The Luswane Loluphile project is empowering the healthcare providers in eSwatini to improve their provision of neonatal care, hence this project is enabling our neighbouring country to draw on our experience and expertise in neonatal care, which will promote equity and dignity in health care in eSwatini.

Science for creating a healthier society

During the reporting period, our research has been taken out to the people/community in the following ways:

The Luswane Loluphile project in eSwatini has helped our colleagues in our neighbouring country to improve the provision of neonatal care, thus helping to save the lives of the most vulnerable members of our society.

Various members from the unit have presented our research findings at national and international conferences such as the SA Aids Conference, Pathology Research and Development (PathReD) Congress, International Aids Society Conference, 15th International Workshop on HIV and Pediatrics Hybrid, 5th Early Childhood Intervention Conference in Johannesburg, 5th International Developmental Paediatrics Association Congress (IDPA), 14th Biennial O&G Update, and the South African Paediatric Association (SAPA) Paediatric Conference.

We have also engaged on various media platforms to improve the visibility of our research, including the creation of a LinkedIn profile for our Research Centre. This has enabled active engagement around our research and feedback has been positive as people learn about the latest advancements in health research emanating from our research unit.

In celebration of 30 years of democracy in South Africa

The unit's commitment is to continue to develop and implement effective interventions and provide relevant solutions for some of South Africa's greatest challenges in maternal, newborn and child health care. We believe that our multidisciplinary team, comprising obstetricians, paediatricians, immunologists, nutritionists and child development specialists, possesses the required expertise to research and develop sustainable solutions for South Africa's health challenges.

HIV, AIDS, TB AND OTHER COMMUNICABLE DISEASES

RESEARCH PROGRAMME 3

PURPOSE OF THE PROGRAMME

To conduct research on preventing HIV and related co-morbidities including TB and other infectious diseases, such as malaria. It seeks to contribute to the national and international science system by testing TB drugs and malaria insecticides and carry out the AIDS Vaccine project by coordinating the development and test of HIV vaccines in South Africa, in partnership with our funders and our regional counterparts.

UNITS THAT CONSTITUTE THIS PROGRAMME

1. Antibody Immunity Research Unit (ERU)
2. Centre for the Study of Antimicrobial Resistance Research Unit (ERU)
3. Centre for Tuberculosis Research Unit (IRU)
4. HIV and other Infectious Diseases Research Unit (IRU)
5. HIV-TB Pathogenesis and Treatment Research Unit (ERU)
6. Intersection of Non-Communicable Disease and Infectious Disease Research Unit (ERU)
7. Malaria Research Group (IRU)
8. Office of AIDS and TB Research (IRU)
9. TB Platform (IRU)
10. Vaccine and Infectious Diseases Analytics Research Unit (ERU)

PROGRAMME STRATEGIC OBJECTIVES

- To increase the body of knowledge informing the development of the response to prevention and curative interventions for HIV, AIDS, TB and other communicable diseases.
- To increase the contribution to the national health system by maintaining national health research facilities that provide services for the prevention of HIV and related co-morbidities, including TB.
- To provide research grants to principal investigators responsible for HIV research in line with European and Developing Countries Clinical Trials Partnership (EDCTP) TESA mandate, provide financial support to researchers within neighbouring countries for training in laboratory and research techniques, utilising funds from sponsors and Unit savings.
- To provide leadership and coordinate activities for training and development of young scientists and employees at different levels and to work towards retention of critical skills and talent management thereof.
- To ensure appropriate training of clinical, laboratory and other research staff, and communities in and around the research sites.
- To increase the body of scientific knowledge through research translation into products, patents, papers, policy practice and health promotion (including to the general public) by organising meetings, seminars, workshops and conferences.
- To design and construct the most appropriate and promising HIV candidate vaccines for southern Africa and to increase the number of interventions developed for TB and HIV.
- To increase the body of scientific evidence that relates to testing and evaluating medical equipment and devices that are developed for the prevention of HIV and related co-morbidities.

RESEARCH HIGHLIGHTS UNDER THIS PROGRAMME

Antibody Immunity Research Unit

Unit director:
Prof. Penny Moore

Prioritising responsive research through impactful interventions

The main focus of the Antibody Immunity Research Unit (AIRU) is to (1) conduct HIV-related research for prevention and cure, (2) conduct SARS-CoV-2 research and (3) to expand HIV technologies and platforms to other pathogens. During 2023, AIRU continued to make key contributions to SARS-CoV-2 research, but also regalvanised our HIV research programme after the pandemic. The unit has also expanded to other pathogens such as respiratory syncytial virus, Ebola, influenza and cytomegalovirus. This expansion is within the long-term vision of the unit, which aims to translate its HIV expertise toward other viral pathogens of relevance to South Africa. Furthermore, this expansion results in the creation of new research niches for early career investigators.

Equitable capacity development for empowering communities

AIRU remains committed to capacity strengthening within the lab, nationally and internationally. Teaching has continued to be a key focus of AIRU, which graduated 4 Honours students, 4 MSc students and 2 PhD students during the reporting period. In addition, members of the unit delivered 2 plenaries, 21 invited talks and 26 abstract based talks. Both staff and students participated in numerous short courses and workshops which included Human Resources training, statistical courses, and flow cytometry training. AIRU continues to promote equity within the lab and has a staff component that is 76% Female and 24% Male. Of these, 52% are Black, 31% White, 12% Indian and 5% Coloured. Prof Moore also serves on the scientific advisory boards of several national and international capacity-strengthening initiatives.

Science for creating a healthier society

During the reporting period, the unit has been involved in several activities to promote community awareness of the research we are involved in and the promotion of careers in the sciences. This includes allowing scholars who are considering a future career in medical sciences to spend time in the unit job shadowing. AIRU also hosted undergraduate medical and biological sciences students for a day in the lab where staff and students shared their different career paths highlighting the various options available to them if they are considering a career in the medical sciences/research field. AIRU is part of the BRinging Innovation to clinical and Laboratory research to end HIV/AIDS In Africa through New vaccine Technology (BRILLIANT) Consortium, which was awarded by USAID in 2023.

The aim is to conduct HIV clinical trials in Africa, using immunogens designed and produced in Africa over the next 5 years. An important part of the BRILLIANT grant is community engagement and the development of materials to raise awareness and educate the public about the trials and the underpinning science.

In celebration of 30 years of democracy in South Africa

The Antibody Immunity Research Unit seeks to conduct world-class science, tackling viral pathogens of public health relevance for South Africa and the African continent, with the principles of capacity strengthening and translation underpinning all our work.

As our country commemorates 30 years of democracy, the Antibody Immunity Research Unit reaffirms its commitment to improving health through world-leading scientific research.

Antibody Immunity Research Unit team.

Centre for The Study of Antimicrobial Resistance Research Unit

Unit director:
Prof. Keertan Dheda

Prioritising responsive research through impactful interventions

The Centre for the Study of Antimicrobial Resistance (CAMRA) collaborates with South African and international scientists and clinicians to conduct research into TB and non-TB MDR pathogens. This includes: (1) studies to investigate the relationship between pharmacokinetic (PK) mismatch and drug resistance development, and subsequent strategies to improve diagnostic readouts to detect mismatch and newer approaches to drug delivery including inhaled formulations of existing drugs (2) to investigate treatment outcomes and transmission dynamics of patients with drug-resistant TB, including those receiving new and repurposed drugs such as bedaquiline and linezolid (3) To investigate the organ-specific viral kinetics and bioaerosol transmission dynamics of patients infected by COVID-19. These research activities aim to provide important insights into mechanisms of drug resistance evolution (and SARS-CoV2 immunopathogenesis and transmission) and subsequently lead to better diagnostic and treatment strategies, transmission interruption strategies and to understand the epidemiology of patients who fail treatment, especially those on new and repurposed drugs.

During the reporting period, we have made several notable achievements. Firstly, we published on SARS-CoV2 transmission in cough aerosols (Jaumdully et al, Nature Comm 2024; IF=16) showing the presence of culturable SARS-CoV2 in cough aerosols and emphasising the need for public health strategies to interrupt transmission. We also published on SARS-CoV2 organ-specific viral kinetics (Tomasicchio et al. Amer Jour Resp Crit Care 2024; IF=24). This work showed the presence of culturable SARS CoV2 in the lower respiratory tract which correlated with exaggerated and dysfunctional immune responses and accelerated death. This work improved our understanding of COVID-19 immunopathogenesis and informs future treatment strategies. An editorial was written on this publication in the same journal. We also published work highlighting potential sources of MDR pathogens in hospital settings and subsequent strategies to minimise nosocomial spread (Dheda et al. Infec Drug Resist: 2023).

Equitable capacity development for empowering communities

We have developed a new sequencing facility (using funds from CAMRA and UCT) which includes a new iSEQ 100 and ONT MinION sequencer and a Tapestation 4150. This will be used to facilitate several of our CAMRA sequencing studies including (i) the T3 RCT to determine the impact of targeted sequencing for guiding individualised treatment in patients with drug-resistant TB, (ii) the PAKMAN study which seeks to improve sputum-based diagnostics for MDR-TB using targeted-sequencing approaches Several staff, including two females, are being trained in sequencing techniques.

We also have several SAMRC-funded clinicians who are undertaking PhDs in the field of drug resistance. Dr Suzette Oelofse is performing a prospective study to determine treatment outcomes and transmission dynamics of MDR patients. Dr Alex Scott is looking at the utility of CAD CXR in identifying undiagnosed TB cases in the community. Dr Ali Esmail recently submitted his PhD on novel sputum and non-sputum-based diagnostics for TB. We also have a prospective black African MSc student joining the unit to examine immune responses in the lungs of drug-resistant TB patients.

Dr Brandon Reyneke, recently received an Emerging Research award from UCT (ZAR 100K) to perform the DISTINCTIVE TB study, which aims to determine the heterogeneity in the Mtb resistance profile found in sputum compared to individual cough droplets using whole genome sequencing. We have also initiated two collaborations this year: we have partnered with Professor Christoph Lange at the University of Borstel in Germany to provide the capacity to perform targeted sequencing in the T3 study (30K EUR). We have also partnered with Dr James Brust at the Albert Einstein College of Medicine to investigate intracellular bedaquiline and clofazimine concentrations of in alveolar macrophages and to determine the utility of measuring drug levels in exhaled breath.

Science for creating a healthier society

In Cape Town, our XACT3 and 19 studies provide feedback to the communities concerned through meetings, which typically involve a presentation of the study and its main findings focusing on the detection and prevention of TB and HIV.

Prof Dheda, the Head of CAMRA serves on the South African TB Think Tank and is also part of the National TB Advisory Committee. He has communicated the relevance of the PAKMAN study, where we measure PK levels of new and repurposed drugs in lung tissue, especially given the observed increases in the bedaquiline resistance rates. Prof Dheda is also regularly interviewed in national and international media where he highlights and translates the research of the unit, including TB and COVID-19, to a general audience. We have also communicated much of our findings through conference proceedings and publication in peer-reviewed journals. We have published our work on COVID-19 and drug-resistant TB in several high-impact journals. Several staff have also presented findings at international conferences including IUATLD conference and the EDCTP forum in 2023. Dr Tahlia Perumal won the best clinical presentation at the latter conference.

Finally, during World TB Day this year, we hosted an event at Brooklyn Chest Hospital, where we demonstrated TB diagnostic technologies and infection control measures to patients and performed outreach activities by providing donations of art supplies to the pediatric TB ward and food parcels to TB patient from sub-economic areas.

In celebration of 30 years of democracy in South Africa

CAMRA's research into antimicrobial resistance aims to improve the health and well-being of South African citizens at several levels:

Our work aims to perform clinical research that can aid in providing healthcare access and improve health-related outcomes to all individuals regardless of race, religion and gender, thus promoting democratic principles of fairness and justice.

Our evidence-based research focuses on the most prominent health issues faced by South Africans. TB remains the biggest cause of death in the country and drug-resistant TB is a major contributor to the national TB burden. This work will inform and guide policymakers on the best strategies to implement to reduce the burden of disease.

Access to accurate health information empowers citizens to make informed decisions about their own health and advocate for policies that benefit their communities. A major component of our research is to educate the public about TB and AMR including preventive measures, and available treatments, thereby fostering a more engaged and knowledgeable citizenry.

We also aim to focus on capacity building by training the next generation of scientists to tackle the most relevant health issues, such as TB and AMR in general. This fosters innovation, economic development and helps the country to be more self-sufficient in addressing these specific health challenges. Our collaborations with international researchers allow us to participate and contribute to AMR research at a global level.

Centre for Tuberculosis Research Unit

Unit Director:
Prof. Robin Mark Warren

Prioritising responsive research through impactful interventions

The SAMRC Centre for Tuberculosis Research (CTR) continues to demonstrate its commitment to driving impactful research across various aspects of tuberculosis. Notably, the Centre has made substantial strides in the development of critical diagnostic tools, such as two fingerstick blood tests meeting the WHO's minimum target product profiles for non-sputum triage tests, potentially paving the way for future commercialisation. This research is complemented by the unit's work in developing a clinically relevant biosignature for COVID-19 mortality with significant sensitivity.

Additionally, the integration of next-generation sequencing methods into routine care has shown promise in rapidly diagnosing drug resistance, ultimately leading to improved treatment outcomes. The CTR's influence extends to contributing through investigations into clinical utility of methods for pulmonary tuberculosis screening as well as exploring the association between TB drug exposure and genetic variants, providing novel insights into Southern African patients' pharmacogenetics and pharmacokinetics. The investigation into the role of sex hormones in modulating immune responses to *Mycobacterium tuberculosis* infection offers promising insights into population disparities.

Leveraging cutting-edge technology, the unit has advanced the understanding of epidemiological links at the human-animal interface (One Health) through culture-independent identification of Mycobacteria spp. The unit's comprehensive research also encompasses exploring the diagnostic utility of molecular methods for non-tuberculosis infections within routine care and identifying active anti-tubercular agents from novel South African medicinal plants, showcasing their commitment to exploring diverse research avenues. Innovative approaches have led to the development of magnetic nanoparticles coated with marine bioactive drugs, specifically targeting the promotion of apoptosis of *Mycobacterium tuberculosis*, as well as studying factors influencing the formation and physiology of persister bacteria in TB disease. Furthermore, the study of the *Mycobacterium tuberculosis* IFIT2 transcriptional profile has offered new dimensions for potential host-directed therapies.

Overall, the CTR's ground-breaking initiatives continue to drive knowledge generation in TB research.

Equitable capacity development for empowering communities

In 2023/24, the CTR saw 10 PhD students, 24 MSc students, and 11 Honours students graduate from Stellenbosch University within the stipulated timeframes, demonstrating their commitment to timely academic achievement. The period also welcomed 33 postdoctoral, 53 PhD, and 48 MSc students. Efforts to advance gender diversity and elevate postdoctoral fellows were evident, with 67% female representation among postgraduate students and 30% of the student body consisting of postdoctoral fellows. Notable academic advancements were celebrated, including Prof Andre Loxton's appointment as Chief Specialist Scientist, Dr Lucinda Baatjies' promotion to Senior Scientist, and the appointments of Profs Vuyo Mavumengwana, Desiree Petersen, and Bienyameen Baker as Associate Professors.

Members of the CTR held a 3-day D43 planning meeting with representatives from African partner institutions in March 2024.

The GenPath Africa team, including investigators from Belgium, Germany, Kenya, Mozambique and South Africa, met for the first time in-person at the annual project team meeting.

The CTR prioritised continuous learning by facilitating remote participation in a diverse array of training courses and events. A total of 224 participations from CTR members were recorded in virtual workshops, conferences, webinars, and training courses. Additionally, the CTR hosted various training courses, such as statistics workshops, the VALIDATE One Health Workshop, bioinformatics workshops, RedCap and Excel coding for data automation, Wellcome Advanced courses, workshops focusing on responsible research conduct and the Asian-African Society of Microbiology training course. These initiatives have contributed to the professional development and knowledge enhancement of staff and students at the CTR.

Science for creating a healthier society

The CTR has seamlessly bridged the gap between laboratory work and the local community through its Societal Impact Task Team. Committed to translating research findings into substantial impact, the team has embraced innovative, inclusive, sustainable, and transformative engagement with various stakeholders. By prioritising collaboration and community-driven solutions, they aim to empower individuals, forge resilient societies, and ensure equal opportunities for growth and success. The Centre's wide-ranging efforts have resulted in over 100 outputs. Key projects for the reporting period include:

(1) Participation in several World TB Day community events hosted by the Western Cape Department of Health in Saldanha Bay, and local clinics including Kraaifontein Community Health Centre, Bloekombos and Phola Park Clinic, serving as a mass TB screening drive and creating disease awareness. (2) The ArcelorMittal Foundation Saldanha Science Centre West Coast Careers Expo, hosted in collaboration with various organisations, aimed at promoting career opportunities and science education. (3) The Biomedical Research Institute Public Open Day and #MatiesBCAI23 Breast Cancer Awareness Initiative hosted in collaboration with the Faculty of Medicine and Health Sciences, focused on showcasing biomedical research, creating awareness and engaging with the public. (4) Participation in the Eskom Expo for Young Scientists Cape Town Regional Fair 2023, emphasising the Centre's commitment to fostering young scientific talent in the region, and (5) Presenting the Generation Science (GenS) programme in collaboration with the SAMRC for South African youth (Grade 10-12) from previously disadvantaged schools. This initiative provided an interactive job shadow programme, offering a first-hand experience of life as a scientist.

In celebration of 30 years of democracy in South Africa

As South Africa celebrates 30 years of democracy, the SAMRC CTR proudly reaffirms its unwavering commitment to conducting world-class TB research. The Centre's dedication lies in generating knowledge that can be translated into new tests, diagnostics, and vaccines, poised to have a transformative impact on health policies. By harnessing the power of innovative research, we aim to drive actual change that will ultimately benefit our societies. In honouring this milestone, we pledge to persist in our pursuit of breakthroughs, pushing the boundaries of scientific understanding to combat the prevalence of tuberculosis, a disease that has long plagued our nation. Through our sustained efforts, we aspire to contribute to the advancement of essential health policies, ensuring that our research resonates throughout our communities, uplifts the broader society, and aids in the universal fight against TB.

As we reflect on the strides made over the past three decades, we are resolute in our mission to elevate the global standard of TB care, and we remain fervently committed to pioneering research that will echo through the annals of healthcare history.

Dr Lucinda Baatjies' promotion to Senior Scientist.

Appointment of Prof. Desiree Petersen as Associate Professor.

Prof Vuyo Mavumengwana appointed as Associate Professor.

VALIDATE One Health Workshop to discuss how a One Health approach could advance research on tuberculosis and Leishmaniasis.

Members of the CTR in the Northen Cape for the TB123 outreach programme with the headmaster of Carlton van Heerden Secondary School.

Students and supervisors at the CTR celebrating their graduation.

HIV and Other Infectious Diseases Research Unit and Other Infectious Diseases Research Unit

Deputy Unit Director:
Dr. Elizabeth Spooner

Prioritising responsive research through impactful interventions

The HIV and other Infectious Diseases Research Unit (HIDRU) contributes to reducing the high burden of infectious diseases, particularly Human Immunodeficiency Virus (HIV), sexually transmitted infections (STIs), COVID-19, and tuberculosis (TB), in South Africa and globally. The unit addresses this problem by leading a programme of studies that assess the safety, pharmacokinetics, and efficacy of chemotherapeutic agents, vaccines, and antibodies. HIDRU is also engaged in testing interventions that strengthen services for populations affected by HIV, TB, COVID-19, and STIs. By targeting three focal areas (HIV, TB, and COVID-19) and 2 cross-cutting areas (socio-behavioural science; and maternal, family, child health and nutrition).

We are investigating the safety and efficacy of new HIV vaccines and assessing the best combinations of pre-exposure prophylaxis (PrEP) to prevent HIV among young women. Our research includes describing TB epidemiology in preparation for a Phase 3 M72 TB vaccine study starting in mid-2024 and analysing treatment outcomes for pregnant women, infants, and individuals with multi-drug resistant TB (MDR-TB) and HIV. We are also evaluating new preventative and therapeutic TB vaccines. Additionally, we are studying the safety, efficacy, and effectiveness of COVID-19 vaccines, including their safety during pregnancy, and the epidemiology of COVID-19 in pediatric populations in low- to middle-income countries. Furthermore, we are assessing the safety and pharmacokinetics of broadly neutralising antibodies in infants exposed to and living with HIV, as well as the effectiveness of interventions to reduce maternal and perinatal mortality.

Equitable capacity development for empowering communities

HIDRU supports the capacity development of staff through study support or seed funding to promote unit-initiated research through unit baseline funds. A committee reviews staff applications and ensures equitable support. In 2023, 55 staff were supported as follows: three towards a PhD; 12 towards a master's degree; 16 towards a diploma, undergraduate or postgraduate qualification; 17 towards a certificate or module completion; two to attend skills-building workshops; four to attend a conference; and one staff received seed funding. In 2021, HIDRU recognised a

PrEPVacc Investigators meeting with Community Members, Dar es Salaam Tanzania January 2024.

Community training by Dr Logashvari Naidoo, Principal Investigator at Chatsworth Site.

Chatsworth Community Advisory Board meeting.

need for mentoring capacity development alongside the Individual Development Plan. A mentorship programme was established with two arms: one to assist with short-term goals (such as preparing a conference poster), and one to assist with long-term goals, such as gaining experience for a new position within the unit.

Currently, 46 staff members have made use of the short-term programme and 56 of the long-term programme. In the first 18 months of the programme, 15 staff were successful in interviews for new positions, and eight were successful in career progression and advancement.

The unit's contribution towards democratising health and building community partnerships in the country is showcased in our Community Working Groups (CWGs). Its members are community volunteers elected from their communities at the clinical research sites, and they support our research in several ways. They provide input on new protocols and study material and advocate for the uptake of health interventions in the community. HIDRU coordinates their training in communication, understanding science, and the efficacy of biomedical interventions. These trainings have resulted in growth for many members, with some now serving as chairs within local, national, and international groups. Their capacity development is also evidenced in a member who participated in two international webinars and provided a community perspective to the PrEPVacc trial update.

Science for creating a healthier society

As part of the HIDRU communication and results dissemination plan, participants, stakeholders, and community working groups received updates on key results of HIV, TB, and COVID-19 research quarterly, with the resumption of face-to-face meetings at the site level and jointly for the annual Community Working Group event. Participant events were held per site for study updates and result dissemination. In addition, dissemination of research to collaborating stakeholders was also conducted, including the South African Department of Health (district, provincial, and national levels), regulatory bodies, research organisations, and trial participants. Senior unit personnel are also active on various advisory committees and working groups at provincial, national, and international levels.

The annual update and Memorandum of Agreement meeting with the KwaZulu-Natal Provincial Department of Health continued online, and the eThekwini Health Unit was engaged and updated on HIDRU studies and upcoming studies. HIDRU also hosted symposia on the following topics: i) Interactions between COVID-19, HIV, and TB; and ii) Children living with or exposed to HIV. The unit also participated in webinars, press releases, and policy briefs. Finally, multiple scientific presentations were conducted by scientists and non-scientists during the reporting period.

In celebration of 30 years of democracy in South Africa

Thirty years into democracy in South Africa, the landscape of the HIV epidemic has undergone a profound transformation. HIDRU has been at the forefront of adapting to these changes, implementing a multi-faceted approach to prevention. From pioneering microbicides to advocating for pre-exposure prophylaxis, developing vaccines, and refining treatment methods, HIDRU has remained dedicated to mitigating the spread of HIV in South Africa.

Central to HIDRU's ethos is its unwavering commitment to exploring and implementing effective prevention and treatment strategies. By engaging, educating, and enrolling thousands of women, men, and adolescents in groundbreaking studies and trials, HIDRU has played a pivotal role in advancing global understanding of HIV prevention and treatment.

HIV-TB Pathogenesis and Treatment Research Unit

Unit director:
Prof. Salim S. Abdool Karim

Prioritising responsive research through impactful interventions

CAPRISA's goals incorporate research and implementation efforts to combat TB, HIV, and COVID-19, to improve health outcomes of affected individuals. Goal (1) Reduction in DR-TB mortality and improved therapeutic outcomes: The TRiAD and ADAP-TIV Studies seek to reduce mortality and enhance therapeutic outcomes in DR-TB patients through expedited diagnosis and optimised treatment support. Goal (2) Finding and Preventing Tuberculosis: The TARGET TB study aims to identify TB transmission hotspots for effective TB screening. Goal (3) Implementation Science Research to mitigate individual and public health burden of SARS-COV-2: Our studies identified rapid diagnostic tests for early virus variant detection, demonstrating effectiveness in recognising delta, beta, and omicron strains during these pandemic phases; and developed a visualisation framework to understand Long-COVID for improved research and clinical comprehension. Goal (4) Improving HIV-TB co-infected patient survival through treatment optimisation: The INSIGHT trial evaluates the efficacy, safety and pharmacokinetics of Bictegravir-based treatment for HIV patients undergoing DS-TB treatment. Bictegravir has a high barrier to resistance and is co-formulated with emtricitabine and has a safer long-term bone and kidney health profile compared to current ART. Goal (5) TB pathogenesis among PLWHA: Our studies found an association between high IL-6 levels and lung cavitation; expansion of dysfunctional CD56neg subsets in TB/HIV co-infection, CD56bright cells linked to delayed culture conversion; and higher monocytes and dendritic cells in TB/HIV co-infection and linked to cavitation and delayed culture conversion. Goal (6) Impacting policies and practices to reduce the dual burden of the HIV and TB epidemics:

The unit engaged, contributed, or participated in keynote addresses, presentations and policy discussions involving key stakeholders in private and public sectors.

Equitable capacity development for empowering communities

CAPRISA, through its multifaceted initiatives, is actively promoting equity through its Employment Equity Committee and it has obtained clean audits for three consecutive years. The unit is engaged in building research capacity, graduating five PhD students in 2023-2024 and ongoing supervision of two additional students. Additionally, the organisation hosts five postdoctoral research fellows.

Staff development remains a priority, with numerous employees pursuing higher degrees with some funded internally through UKZN and CAPRISA. Importantly, staff and CAPRISA fellows graduating with higher degrees in the 2023/2024 graduation cycle include five masters, eight honours and two post-graduate diplomas. A further four masters' fellows are awaiting results.

CAPRISA has been undertaking an annual clinical trials capacity-building programme for graduate interns since 2023.The aim of the programme was to allow unemployed graduates to receive a 12-month

Caprisa's 20 year celebratory symposium and gala dinner held in June at the Durban ICC.

From L-R: Prof Salim Abdool Karim, Profs Peter Piot Special Advisor on COVID-19 to the President of the European Commission, Jeremy Farrar, Chief Scientist WHO, Minister of Health Dr Joseph Phaahla and Zandile Myeni Deputy Mayor eThekwini.

training in conducting clinical trial research in HIV/AIDS, TB, and COVID-19. Eight of the 13 interns from 2023 were appointed as staff in 2024. Community capacity development is prioritised through outreach programmes and training aimed at enhancing competency, advocacy and empowering community members.

Through partnerships with Treatment Action Campaign, CAPRISA undertook a programme of HIV, TB and COVID-19 literacy sessions for representatives for advocates from several community-based organisations across SA. Engagement with leadership of traditional health practitioners' organisations in KZN aimed at strengthening capacity within this group for identification, referral and support of patients with all forms of tuberculosis, is ongoing. Through our leadership in the KZN provincial AIDS council, we contributed to knowledge sharing and led discussions on addressing health challenges in SA, with a focus on ending HIV/AIDS, TB, and STIs by 2030.

Science for creating a healthier society

The unit's efforts collectively reflect a multi-dimensional approach to addressing global health challenges, ranging from policy, advocacy, education, social mobilisation and capacity-building. Professor Abdool Karim delivered lectures at academic and global health agencies including London School of Hygiene and Tropical Medicine to the National Centre for Global Health and Medicine in Tokyo- concerning policy engagement, Professor Abdool Karim participated in the WHO Evidence-to-Policy Summit and SA Embassy Round Table Berlin. Dr Rubeshan Perumal participated in the GVN Long-COVID meeting in Monaco and Professor Naidoo participated in the WHO guideline development committee policy on the role of HIV viral suppression in improving individual health and reducing transmission. Nationally, Prof Abdool Karim engaged in the Presidential Health Summit,

while Professor Naidoo contributed to the NCAC for DR-TB, as a reviewer of the TB component of the national strategic plan 2023-2028, provided an overview of innovation in TB at the 2023 BRICS Summit and NDoH TB Indaba. Mr Patrick Mdletshe supports SANAC in varying capacities and led the development of the HIV prevention arm in the KZN Provincial Implementation Plan. Locally, CAPRISA's community mobilisation efforts targeted HIV and TB treatment and prevention, education, and advocacy. Targeted education projects aimed at stakeholders like SANTACO, tribal chiefs and educational institutions are underway.

In celebration of 30 years of democracy in South Africa

The unit is committed to advancing the significant gains made over the past three decades. We recognise the phenomenal advancements made in the health sector that include strengthening health systems, establishing primary healthcare clinics, investing in basic and clinical medical research to address diseases affecting the poor and vulnerable in our society, and establishing opportunities to pursue high-impact research that contributes to global policies.

Our democracy created an enabling and diverse environment for African researchers to develop as world-class infectious diseases experts, leading collaborative research studies across the global north and south. The unit is privileged to have been part of this historic journey.

We remain committed to pursuing our goal to end TB through global, collaborative, contributions and studies, in developing innovative diagnostic tools and treatment regimens – shaping policies and guidelines for effective prevention and treatment strategies – that are cost-effective and accessible. The unit remains committed to saving lives.

Dr. Thomas Nyirenda presented the award for the prestigious Outstanding Female Scientist Prize to Prof. Kogie Naidoo at the 11th EDCTP Forum held at the Palais des Congrès de Paris in Paris, France in November. Prof. Naidoo was also elected as a Fellow of the Royal Society of South Africa in October 2023.

Intersection of Non-communicable Diseases and Infectious Diseases Research Unit

Unit director:
Prof. Ntobeko Ntusi

Prioritising responsive research through impactful interventions

Over the 2023/24 reporting period, the work of the Intersection of Non-communicable and Infectious Disease Research Unit has focused on 7 key programmes:

(1) Understanding the biology of heart failure among Africans, the contribution of associated infections to outcomes, and the association of anaemia with outcome of heart failure, as well as studies on the genomic basis of cardiomyopathy in Africans;

(2) Studies on the biology of HIV-associated cardiovascular disease in adults and adolescents with a focus on both mechanistic studies as well as outcome studies, including clinical trials;

(3) Studies on the biology of tuberculosis and the cardiovascular system, using imaging biomarkers and well as focus on outcomes;

(4) Ongoing studies of the biology of COVID-19 as well as cardiovascular and all-cause outcomes and mortality in individuals with COVID-19;

(5) Studies on the role of cardiovascular magnetic resonance in rheumatic heart disease, as well as studies of peotoemic and metanolomic profiling in individuals with rheumatic heart disease;

(6) Studies of the role of H. pylori in the pathophysiology and in influencing outcomes in patients with resistant hypertension;

(7) Studies of predictors of outcome in individuals with preeclampsia and other forms of pregnancy-induced hypertension in individuals with and without HIV infection.

Equitable capacity development for empowering communities

We have numerous students who are undertaking research projects embedded in the studies described above for masters, doctoral, postdoctoral and early career research programmes. In addition to the formal capacity building through academic training, the students regularly attend conferences and workshops, where they present their data and results, and have also had opportunities for exchange with collaborators.

Science for creating a healthier society

In the past year, we have had two opportunities to present our research to patient groups, both at the University of Cape Town as well as in the Kensington clinic. In addition, our research has been featured in two issues of Nature Africa. As the Principal Investigator (PI) of the group, I have been invited on different radio stations to speak about some of the research we do and some of our findings.

In celebration of 30 years of democracy in South Africa

We believe that health research is an important mechanism not only to improve the health of the nation, but also to improve the economy of the nation. Our commitment is to continue to contribute to quality health research and through knowledge generation in hope to contribute to a healthier South Africa.

We are immensely grateful to the SAMRC for the continued support of our work.

Malaria Research Group

Platform director:
Prof. Rajendra Maharaj

Prioritising responsive research through impactful interventions

The Malaria Research Group (MRG) is committed to (1) Ensuring all South Africans have access to quality, safe, effective, affordable malaria interventions through timely and sustainable initiatives that reinforce the elimination agenda, (2) To generate new knowledge and tools to further the malaria elimination agenda, and (3). To provide a platform for malaria scientists in-country and sub-regionally to share research that contributes to NdoH's elimination agenda.

Our projects over the 2023/24 reporting period, include:

(i) Lubombo Spatial Development Initiative 2 – Indoor residual spraying (IRS) is the main tool employed in South Africa to control vectors and reduce malaria transmission. For successful control it is vital to determine the resistance profile of vectors. The project aimed to determine the insecticide resistance profile of vectors in three endemic provinces of Limpopo, Mpumalanga and KwaZulu-Natal. Laboratory tests revealed field-collected mosquitoes were vulnerable to insecticides used by provincial control programmes. This influences vector control policy.

(ii) Source reduction of malaria incidence in southern Mozambique. Monitoring and evaluation of the indoor residual spraying (IRS) programme in selected districts in southern Mozambique. MRG was awarded a R14 million tender by NDoH to monitor and evaluate the quality and impact of IRS in three districts in Mozambique. The grant funded the scale-up of IRS to reduce disease burden. Funds were also used to measure the impact of IRS on disease transmission. The study revealed IRS provided good coverage of targeted houses and subsequently protected resident populations.

(iii) Determining the efficacy of Transfluthrin on Anopheles Arabiensis over 28 Days using sticker envelope that releases the active ingredient. This trial investigated Transfluthrin as an alternative to current tools used in malaria control programmes. Results revealed that the product was effective under laboratory conditions.

(iv) Laboratory trial to determine the efficacy of a new IRS Insecticide:SYN54707 WP. The aim of the trial was to determine the effectiveness of a new insecticide on different surfaces. Results showed the insecticide was effective on four different surface types over 12 months.

MRG Insectary: Advancing Lab Trials for Malaria Research.

Equitable capacity development for empowering communities

The MRG provided various capacity-building initiatives for malaria control staff in each of the three malaria-endemic provinces of KwaZulu-Natal, Limpopo and Mpumalanga. The training encompassed the specific areas of (1) Entomological surveillance, (2) Mosquito collections, (3) Insectary Management, (4) Project Management, (5) Diagnostic tools and (6) Epidemiology. The MRG also arranged for the malaria control programme staff to attend PCR training at the NICD. These areas of capacity development assisted in filling knowledge gaps and empowering field staff to work more confidently and efficiently when conducting various aspects of their work. The MRG also provided necessary and valuable consumables to the provinces to facilitate the effective maintenance and running of their insectaries.

The communities are involved in the research that the group conducts in malaria-endemic provinces. The communities are informed of the research projects that the MRG wishes to conduct in their areas. Together with the malaria control programmes, the communities are made aware of the malaria situation and the need for research in their areas. Information sharing encourages community members to participate in research and feedback is given once research has been concluded.

Collecting mosquito larvae in the field for research.

Prof Maharaj with Lifetime Achievement Award recipient Prof Blumberg at the 8th Southern Africa Malaria Research Conference.

Apart from the malaria control staff, training was also carried out with University of Zululand students at Honours level. Formal lectures were attended by the students and some even completed small projects on malaria. Master's and PhD students from the University of KwaZulu-Natal and the University of Pretoria are being mentored by the Director. This is part of an initiative by the MRG to develop research capacity to guide the country to malaria.

Science for creating a healthier society

The majority of the research conducted by the MRG is done within communities. The staff of the Group have travelled on fieldwork to the three endemic provinces as well as to Mozambique to conduct research as part of the LSDI2 and Mozambiquan studies. The MRG's partnership with the provincial Departments of Health in Limpopo, KwaZulu-Natal and Mpumalanga has enabled the group to work productively and cooperatively with all the communities it engaged with.

Information sessions were held with malaria control staff, to discuss quality control of the indoor spraying programme. The need for quality control was discussed in the field and the World

Health Organization guidelines were distributed to participants. This type of feedback was found to be useful in changing the common mistakes in which indoor spraying was conducted.

Information sessions on malaria and its control was also held for schools in the Durban areas. Workplace training sessions were provided to Grade 11 students from schools in Durban. These students approached the group to engage with our laboratory staff to work in the insectary and to collect mosquitoes around their homes. This created an awareness of vector mosquitoes and nuisance mosquitoes.

In celebration of 30 years of democracy in South Africa

The Malaria Research Group is committed to continue providing high-level research to support South Africa's malaria elimination goal. We dedicate our efforts to finding safe, innovative tools that would not only eliminate malaria in South Africa but across southern Africa. It is imperative that the various government departments such as health; border security and human settlements, work together to combat the disease. Parasites and vectors easily cross international borders and control interventions should not stop at borders. Despite the many challenges, the MRG calls upon all governments in southern Africa to strengthen collaborative efforts and share resources so that cross-border malaria is reduced and can eventually be eliminated. The disease affects the poor rural communities in the country who can least afford health care.

Through its research projects, the MRG is ensuring that malaria morbidity is reduced at the source in high malaria endemic countries so that it eliminates malaria in province such as KwaZulu-Natal through a down-streaming effect. Malaria is a disease that is preventable and easily treatable, and no one should die of malaria. The Malaria Research Groups commitment is to ensure that no person should die of malaria and that the disease should be eliminated by 2028.

Field work to collect mosquitoes for research.

Mosquito light traps used in field work.

MRG staff actively engaged in field collection of mosquitoes for research.

Office of AIDS and TB Research

Office director:
Dr. Fareed Abdullah

Prioritising responsive research through impactful interventions

During the 2023/2024 reporting period, the Office of AIDS and TB Research (OATB) has been involved in several projects, these include:

(1) Tuberculosis Research: The OATB has leveraged significant funding from the National Institute of Allergy and Infectious Diseases to implement TB RePORT II, a three-year project that ends this year. This research is done across 7 laboratories in SA, collaborating with 7 other countries, and focuses on identifying biomarkers to detect symptomatic TB, subclinical and incipient TB among patients and their household contacts; (2) Innovative Financing: The Estimates of National Expenditure has earmarked finances for Social Impact Bonds (SIBs) in the Health Vote 18; (3) HIV Research: Our Imagine SIB addresses HIV and teenage pregnancy outcomes amongst school-going adolescent girls and young women (AGYW) by delivering HIV pre-exposure prophylaxis and contraception, increasing initiation and adherence to ART amongst HIV-positive AGYW, and linking pregnant AGYW to early antenatal care. The considerable successes have been shared with the DBE who are eager to ensure these are scaled up; (4) COVID Research: The COVID study aims to evaluate the humoral and cellular immunological responses to SARS-CoV-2 vaccinations administered to patients at Steve Biko Academic Hospital with severe immunosuppressive chronic medical conditions. The study is due to be completed in December 2024 when the findings from the study will inform vaccination and booster protocols and policy; (5) Knowledge Translation: The OATB provides leadership, technical and funding support to the South African TB Think Tank (TB TT). The TB TT brings together TB researchers and the national and provincial TB Control programmes and serves as a very effective research and knowledge translation vehicle, and (6) Health Financing – Presidential Health Compact: The unit leads the work of Pillar 6 that is focused on reviewing and improving national health financial management and systems to realise greater impact and efficiency. This year, our research showed the impact of government-negotiated increases on originally allocated health budgets, resulting in an adjustment being made by the National Treasury.

Equitable capacity development for empowering communities

The OATB co-funds "Determinants of treatment outcomes with an injection-free shorter regimen for multidrug- and rifampicin resistant tuberculosis (SHIFT-TB)". The SHIFT-TB study is based at Nkqubela Chest Hospital which is in a historically disadvantaged area in Mdantsane, Eastern Cape. A major outcome of SAMRC investment in the SHIFT-TB project was the establishment of a highly productive clinical research site at Nkqubela Chest Hospital. The study team has a strong partnership with the hospital leadership and local health authorities whose support was key to the establishment of permanent physical research infrastructure at the hospital. This includes a prefabricated building with two consultation rooms and office space, computers with stable internet connection and backup power supply, an ECG machine, a specimen fridge, and other clinical equipment. This initiative has enormous potential to contribute to improving drug-resistant TB (DR-TB) outcomes in the Eastern Cape through research and clinical support adding tremendous capacity to this previously disadvantaged setting.

The OATB has built on this initial investment by scoping additional research projects in the area in order to bring much needed research to the people of the province. To this end, the OATB is at a very advanced stage of developing a Social Impact Bond to improve DR-TB outcomes and to minimize the risk of resistance to new DR-TB drugs which is a growing concern. This will be done with the assistance of a local implementing partner thus adding further support to the area and capacitating local persons working in the area.

Capacity development and sustainability are embedded in the Imagine Social Impact Bond programme. Technical support, training and mentoring of youth, parents/caregivers, school management, educators, and community service providers involved and affiliated in the programme enable the transference of skills and gearing of all towards achieving programmatic goals.

Science for creating a healthier society

Adolescent girls and young women (AGYW) in South Africa face multiple challenges that significantly limit their prospects of health and well-being later in life. A myriad of social, structural and behavioural challenges is driving high rates of HIV infections and unintended pregnancies among young women while simultaneously hindering the uptake and adherence to available prevention, treatment and care. Our Imagine Social Impact Bond is embedded in the local communities of Moretele situated in the Bojanala district in the Northwest province and Newcastle in the Amajuba district of KwaZulu-Natal. These are rural, underserviced areas.

The purpose of the Imagine Programme is to provide evidence-based differentiated services to high-risk young women through a comprehensive set of biomedical and psycho-social and structural support interventions. The provision of a comprehensive set of evidence-based interventions has been highlighted as an effective means to strengthen the impact on HIV. We thus took scientific knowledge and developed a programme that the local community can be intimately involved with and take ownership of. Regular engagements with school principals have indicated their deep appreciation for the programme and for the tremendous impact it is having on the lives of young women. There is significant motivation for this programme to be scaled up. This is prime example of how robust scientific interventions have been taken to a community who is intimately involved with the service.

Dr Slingers deliberating Data & evidence in OBCs.

Dr Abdullah in panel discussion Relational contracting at 2023GO-LAB Soc conference.

Safe space services provided to AGYW as part of the study.

In celebration of 30 years of democracy in South Africa

The unit is deeply committed to the transformation and equity goals of the organisation and indeed, the country. To this end, the OATB has partnered with Sefako Makgato University (formerly Medunsa) to function as a rotation site for Public Health registrars from this previously Black University. This is in line with the SAMRC's commitment of resources to the "...continued promotion of equity and dignity in health and health care" as part of the organisation's acknowledgement of its historical role in inequalities in health and research during apartheid. To this

end, our unit also has a staff complement which is 100% Black and two thirds female. Furthermore, our funding of capacity development initiatives in impoverished settings will go a long way in uplifting previously disenfranchised communities.

We are dedicated to the United Nations 3rd Sustainable Development Goal which is to ensure healthy lives and the promotion of well-being for all ages. Our primary way of doing this is by applying innovative management and financing tools that promote better service delivery, value for money and equity particularly among vulnerable and previously disadvantaged groups. The OATB is doing groundbreaking and robustly researched work in the field of innovative financing in order to increase domestic funding for health. Catalytic projects such as our Imagine SIB provide rapid learning opportunities that should be shared. It is this knowledge that provided impetus for us launching a Learning Action Network for peer-to-peer learning and strategic dissemination of information. It is our belief that innovative financing initiatives.

Delegates at the Social Outcomes Conference hosted by the Government Outcomes Lab, at the Blavatnik School of Government Oxford University.

Participants at Health Financing – Presidential Health Compact Pillar 6 workshop that took place in Johannesburg.

Tuberculosis Platform

Platform director:
Prof. Martie van der Walt

Prioritising responsive research through impactful interventions

The use of Artificial Intelligence (AI) to read Chest X-rays for diagnosis of pulmonary Tuberculosis (TB). A person that has TB will usually present with any of these symptoms: weight loss, chronic cough, night sweats, and tiredness. The nurse will then collect a sputum sample which is sent to NHLS for investigation by GeneXpert (GXP). The test will determine if there are TB organisms in the sputum or not. It was always known that some people with TB may not have the typical signs and symptoms of TB (asymptomatic disease), and will not be picked up with the GXP, or other tests. It has also become evident that people with asymptomatic disease are a huge driver of disease and in order to fight TB, we will have to proactively seek them out and initiate treatment.

AI tools are much more able to detect small or early abnormalities in the lung, and give an answer of how likely it is TB. AI is as sensitive as a radiologist to pick up these abnormalities but a medical doctor or a nurse without training to look for TB, will miss many probable TB cases. AI tools will then give an answer, while with the human reader Chest X-ray (CXR) image is first referred to a radiologist and depending on their availability there may be a delay before the result is available. For CXR services to be available to diagnose TB, the clinic/hospital should have CXR equipment, a radiographer to take the image and a trained medical doctor or radiologist available on-site to read the images. The latter requirements make CXR as a tool very expensive. It should be available across all areas but people in rural areas may benefit more than those in urban.

Equitable capacity development for empowering communities

Every year in March, the world commemorates World TB Day in celebration of the day, when in March 1822, Robert Koch discovered that TB is caused by a bacterium. With this knowledge in hand physicians and scientists could develop vaccines and drugs to treat the disease. For the March 2024 celebration, the TB Platform staff and post-graduate students visited a primary school to talk to learners, parents and teachers about TB, a disease that has killed more than 50 000 people in South Africa in 2022.

Over the years, the platform's TB celebration events have taken several forms but for 2024, we choose to reach out to primary school learners to instil in them from a young age an interest in science. We integrated the outreach with the Platform's social responsibility initiative of the past two years, a project for which we collected plastic bottle caps to be donated to civil society for recycling. The school had been collecting caps to go towards a wheelchair for one of their disabled learners. By using the bottle caps project integrated into the World TB celebration we showed learners that science is not something being done behind closed laboratory doors, but that SAMRC scientists also use their work to reach out to the communities we serve. The feedback from the school was excellent as we integrated career choices with social responsibility approaches.

Science for creating a healthier society

The Tuberculosis Platform started a social responsibility initiative four years ago by collecting plastic bottle caps with the intention of donating it

to a suitable organisation for recycling. This initiative was started as to increase awareness among staff about recycling and on how to reduce plastic waste, and to be advocates among their families and friends for recycling. We also asked students supervised by staff to start collecting the plastic caps. For this years' World TB Day celebration, staff and students visited a primary school to donate the bottle caps. The students with great initiative and excitement undertook to spell the word "TB" with the bottle caps in the front of the SAMRC Pretoria Building. With this initiative, the TB Platform combined science and the severity of TB as a global health challenge with protecting the environment, another global challenge. With this activity, it was shown how TB research which is often poorly understood by the public can be repackaged as fun and thereby brought to communities.

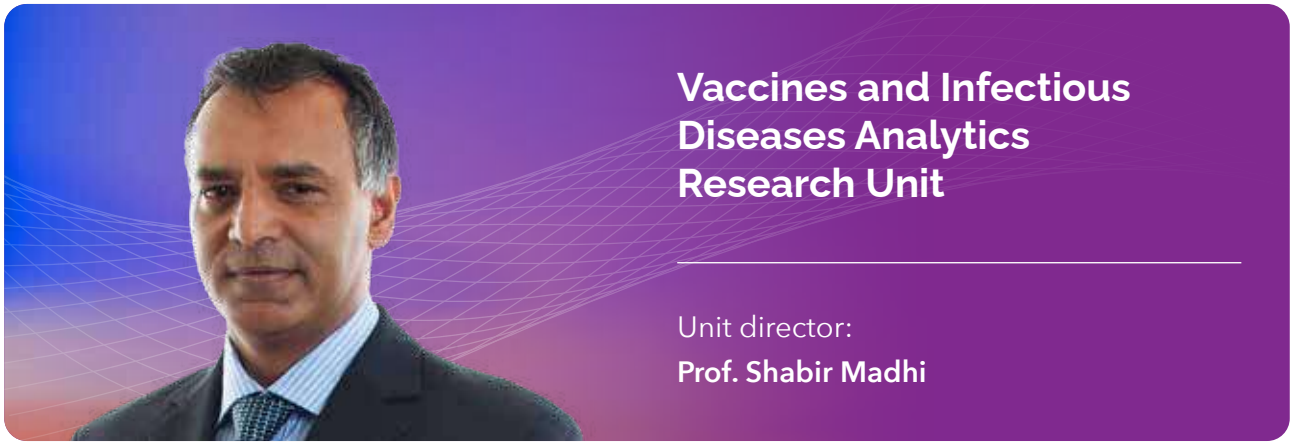
In celebration of 30 years of democracy in South Africa

Over the past 30 years, the platform's research has been used to improve the treatment and care of people with tuberculosis and those who were co-infected with HIV. Our research was included in TB control policies of the South African National Department of Health, and policies developed by the World Health Organization. Our scientists have also served on several international committees and national fora and policy committees. Since the emergence of the SARS-CoV-2 the world has seen how the pandemic devastated society, but the pandemic also had far-reaching implications as ripple effects for diseases such as tuberculosis. The disruption of health services to direct all resources towards COVID-19 control resulted in many patients on tuberculosis treatment not getting the care and treatment they required. Through our research, we identified that many more patients have died during the pandemic period, and fewer children were diagnosed and hence missed out on life-saving treatment.

By understanding which aspects of TB control were mostly affected, the South African Government will be able to protect the most vulnerable when another health catastrophe occurs. People suffering from tuberculosis are often the most vulnerable, and any imbalance in their social structure and livelihood will affect their whole community. Our past research is the foundation for protecting the most vulnerable when future disasters occur.

TB Platform staff and students, formed the TB acronym, using bottle tops.

On TB Day, the TB Platform staff and post-graduate students visited a primary school to talk to learners, parents and teachers about TB.



Vaccines and Infectious Diseases Analytics Research Unit

Unit director:
Prof. Shabir Madhi

Prioritising responsive research through impactful interventions

SAMRC/WITS Vaccine and Infectious Disease (VIDA) Research Unit conducts cutting-edge research on infectious diseases and vaccines in Africa and low-income countries, influencing global policies. We focus on disease surveillance, clinical trials, child health, and mortality prevention. VIDA continues to be a top clinical trial facility for vaccine research. We have conducted key studies on pneumococcal and rotavirus vaccines and are a leader in vaccine research for pregnant women to protect mother-newborn dyads.

During the 2023/24 financial year, our RSV research focused on reducing RSV infections, prevalent in LMICs. Vaccines for adults, and pregnant women and monoclonal antibodies for infants are now FDA-licensed, reducing RSV-associated morbidity and mortality in vulnerable populations.

(1) The 'Matisse' Clinical Trial showed that Pfizer's RSV vaccine is effective and safe in preventing severe RSV-associated lower respiratory tract illness in infants when administered to pregnant women. This study is a promising intervention strategy to protect newborns against RSV infections during their most vulnerable period.

(2) The 'Melody' Clinical Trial, led by SAMRC/WITS VIDA, showed that Nirsevimab, a monoclonal antibody against RSV, effectively reduced RSV-related hospitalisations in term and late-pre-term infants. This single-dose immunisation could potentially benefit high-risk groups worldwide.

(3) VIDA further led a Phase 3 Trial evaluating the MTBVAC vaccine in newborns to prevent tuberculosis. VIDA participated in a multicentre trial comparing VPM1002 to BCG. Our surveillance of respiratory pathogens causing hospitalisations in children under five provides insights into RSV seasonality and incidence, informing public health strategies for managing respiratory infections in children. VIDA also conducted studies on Group B Streptococcus (GBS) to develop maternal vaccines that could reduce neonatal sepsis and meningitis caused by GBS; and

(4) VIDA discovered new antimicrobial agents that are effective against multidrug-resistant Klebsiella pneumoniae infections, helping to combat antibiotic resistance.

Our research made significant progress in combating infectious diseases, improving maternal and child health, and addressing antimicrobial resistance, with potential global impact.

Equitable capacity development for empowering communities

VIDA's capacity development initiatives prioritise equity, dignity, and community empowerment. By nurturing skilled professionals and advocating for inclusive healthcare, we drive positive change in health research and outcomes. The unit promotes fairness, opportunity, quality, and social justice in access, interventions, treatments, and outcomes.

SAMRC/WITS VIDA is widely recognised for its clinical vaccine trials. By training researchers,

clinicians, and scientists, we empower the next generation to conduct rigorous research. Our training programmes emphasise ethical conduct, community engagement, and inclusivity. By involving diverse voices, we ensure equitable representation and respect for all.

By understanding disease patterns and risk factors, VIDA contributes to informed policy decisions. This knowledge directly benefits communities, promoting health equity. VIDA advocates for equitable vaccine distribution and accessibility. Our outreach efforts engage communities, ensuring that vulnerable populations receive timely and dignified healthcare. By disseminating research findings and promoting health literacy, the unit empowers individuals to make informed decisions about their well-being.

VIDA's leadership includes diverse experts who champion equity. We collaborate with national and international partners, fostering a global network committed to health equity. Through mentorship and collaboration, the unit transfers knowledge and skills to LMICs. This strengthens local capacity and promotes dignity in research and healthcare.

Science for creating a healthier society

WITS VIDA has been engaging with the communities of Soweto and Thembelihle for over 27 years. Community engagement is crucial for building relationships between research organisations and the communities they serve. VIDA invests in community engagement to achieve social license-to-operate in underdeveloped areas. Our approach involves culturally sensitive communications and building relationships with community leaders, organisations, and influencers. We have three Community Advisory Boards supporting Soweto, Freedom Park, Thembelihle and Diepkloof. Community engagement informs research priorities and supports participant enrolment. VIDA also contributes to the local economy and drives positive global social impact through community engagement work.

WITS Faculty of Health Sciences partnered with SAMRC/WITS VIDA Research Unit and WITS Health Consortium to address the issue of over 800 unemployed doctors despite critical shortages in the public sector. In just over a month, a week-long programme was designed for 33 doctors to introduce them to the field of health research. The programme covered clinical research foundations, methodologies, ethics, management, statistics, and funding. The outcomes included creating a Community of Practice, career advice, networking, internships, work experience, and employment opportunities. The programme contributes to the development of the research management landscape and driving impact through agile collaboration.

In celebration of 30 years of democracy in South Africa

As South Africa commemorates 30 years of democracy, SAMRC/WITS VIDA reaffirms its commitment to saving lives through pioneering scientific research.

Through innovation and collaboration, VIDA continues to break new ground in the quest to save lives and inform policy for impactful change. As we reflect on the milestones achieved over the past three decades of democracy in South Africa, let us look ahead with optimism and determination, knowing that through impactful research, a brighter and healthier future awaits us all.

HEALTH SYSTEMS STRENGTHENING

RESEARCH PROGRAMME 4

PURPOSE OF THE PROGRAMME

To contribute to health systems strengthening by undertaking systematic reviews, health policy and health systems research to provide evidence for policymakers, stakeholders and researchers seeking to address today's most pressing health challenges. The programme aims to take advantage of information and technology by exploring and expanding the role of eHealth (health informatics, digital health, tile health, telemedicine, eLearning and mobile health) in strengthening health systems..

UNITS THAT CONSTITUTE THIS PROGRAMME

1. Biostatistics Research Unit (IRU)
2. Burden of Disease Research Unit (IRU)
3. Cochrane South Africa (IRU)
4. Health Services to Systems Research Unit (ERU)
5. Health Systems Research Unit (IRU)

PROGRAMME STRATEGIC OBJECTIVES

- To contribute towards the evidence base for national, regional and international health-care decision making by conducting high-quality systematic reviews, and health systems and health policy research reviews to improve health systems effectiveness.
- To strengthen research and development through training and mentoring postgraduate students (MSc, PhD, Postdoctoral Fellows) in eHealth, health policy, health systems research and biostatistics.
- To contribute to capacity development and training in the use and conduct of systematic reviews, and support of clinical trial registration for the African region.
- To synthesise evidence, optimise information and knowledge flow through ICT and other means to ensure that research results are translated into policy, practice, cost-effective products and health promotion.
- To develop and enhance health information systems and surveillance through systematic evaluation and identification of processes for improvement.
- To provide statistical analysis to ensure scientific validity, relevance and efficiency of health systems interventions and/or service delivery models, and engage in health systems strengthening activities.
- To carry out bio-statistical support training projects to assist SAMRC researchers and postgraduate students within the SAMRC.

RESEARCH HIGHLIGHTS UNDER THIS PROGRAMME

Biostatistics Research Unit

Unit director:
Dr. Tarylee Reddy

Prioritising responsive research through impactful interventions

The Data Management Division of the Biostatistics Research Unit (BRU) led the data management of the 2023 Mozambique Malaria Prevalence Survey, harnessing the use of dashboards for real-time visualisation of recruitment and sample composition. Expanding its contribution to data management in the broader region, the division played a key role in the data management for The Ubuntu COVPN 3008 trial, which assessed a 2-dose versus a 3-dose regimen of the Moderna mRNA vaccine among people living with HIV in South Africa and 7 other sub-Saharan African countries.

The Biostatistics Division is nationally recognised for expertise in survey design and methodology and played a key role in the analysis of two national surveys in the past year: The 2022 antenatal HIV sentinel survey and The Sixth South African National HIV Prevalence, Incidence, And Behaviour Survey (SABSSM VI). In both these surveys, the unit played a pivotal role in the design, weighting and analysis. The SABSSM VI survey aimed to estimate HIV prevalence, exposure to ART and VL suppression in HIV-positive individuals at a national, provincial and district level; as well as HIV incidence (annualised rate of new HIV infections) at the national level. The unit has extended its statistical expertise to the SABSSM survey since the first survey in 2002, commemorating 20 years of robust and strategic HIV and public health data.

The unit's SAFOODS Division responded to changes in regulations relating to the reduction of salt in certain food items, with a focused update of the food composition database to address the impact of the reduction of sodium values prescribed in the regulation. The updated database resulted in the compilation of food items across 13 foodstuff categories and an updated database totalling 1 875 food items. This update was published via the SAFOODS FoodFinder programme, impacting all nutritional analysis and its applications in the country.

BRU at the SABSSM Data Analysis workshop.

International Symposium on current trends in modeling and software development in Data science.

Equitable capacity development for empowering communities

All staff in the Biostatistics Research Unit participated in a two-day workshop, led by Executive Coach Zelda Burger, focused on several personal and team development topics including the Enneagram of personality, resilience and self-assurance. Biostatistics and data science are critical and scarce skills in the country as well as the broader sub-Saharan African region.

To ensure sustainable biostatistics capacity development, the integration of open-source software in teaching and learning is crucial. The unit serves as a research partner in the VLIR-UOS International Training Programme project, entitled "eR-BioStat ITP – Development of local E-learning platforms in (bio)statistics." As the first activity of the project, the unit hosted the "International symposium on current trends in modelling and software development in Data Science" from 20th – 23rd February 2024, jointly with the Data Science Institute at Hasselt University (Belgium), at the SAMRC Conference Centre in Cape Town. The symposium included two workshops: 'The eR-Biostat Platform for teaching and learning statistics at both the undergraduate and postgraduate level'; and 'Data analysis, modelling and reporting using R, R studio and R markdown'. The sessions were attended by the leadership of Statistics departments from various universities including University of Venda; University of Zululand; University of KwaZulu-Natal and University of South Africa.

The unit has strengthened skills in several statistical topics including machine learning, cluster randomised trials and joint modelling. In addition to capacity development initiatives aimed at statisticians, the BRU provides statistics training to health researchers via a one-week course. The unit hosted an Introduction to Clinical Trials and Biostatistics course in March 2024 in Durban, South Africa. There were 30 researchers and clinicians who attended the training. Lastly, 8 staff within the unit are currently registered for PhD degrees (six in statistics and two in nutrition).

Science for creating a healthier society

BRU participated in media briefings and interviews following the release of The Sixth South African National HIV Prevalence, Incidence, and Behaviour Survey (SABSSM VI). These engagements led to the release of the key findings of the survey in several national and local newspapers, as well as television and radio.

The unit also hosted Grade 10-12 learners under the GenS program, exposing the learners to data management, GIS, statistical analysis and nutrition research via a practical approach.

Additionally, the updated SAFOODS database published via the FoodFinder web-based programme was used by 396 licensed clients which enabled current nutrition analysis in respective areas of nutrition practice including hospital patient care, private practice, catering and food industry product analysis, university nutrition student training, and nutrition research and publications.

In celebration of 30 years of democracy in South Africa

As South Africa commemorates 30 years of democracy, BRU reaffirms its commitment to improving health through pioneering scientific research and building biostatistics capacity in the country.

Through rigorous data management, efficient study design and robust statistical analysis in collaborative research, as well as innovative self-initiated research in statistical methodology BRU continues to break new ground in the quest to save lives and inform policy for impactful change. As we reflect on the strides made in the past three decades of democracy in South Africa, we look ahead with optimism and dedication to reach greater heights.

The SAFOOD developed a dietary intake assessment mobile application.

Burden of Disease Research Unit

Unit director:
Prof. Richard Matzopoulos

Prioritising responsive research through impactful interventions

As an essential foundation for guiding policy, programmes and practice, the Burden of Disease Research Unit's (BODRU) mission is to assess and monitor the country's health status and determinants of disease. We strive to calculate disease burden and risk factors, which gets revised when updated data and/or new methods become available. The current disease burden is used to project the future burden to provide planning information. It is also our mission to evaluate health information and surveillance systems.

Our aim in the burden of disease analyses and synthesis is to take information from the National Population Register (NPR) and death notification forms to adjust it for known deficiencies such as incomplete death registration, misclassification of HIV and injury deaths and a redistribution of ill-defined causes of death across valid underlying causes to provide information fit for use to improve population health and quality of life.

The 3rd Injury Mortality Survey (IMS) showed suicides, unintentional injuries and homicides with a noted increase in firearm homicides in 2020/21 relative to 2009 remain high in South Africa. However, overall non-natural and transport-related deaths declined during 2020/21 largely due to COVID-19 related restrictions. These findings highlight the need for appropriate policies and programmes on firearms, alcohol, mental health and road safety in the country.

Faced with the challenge of obtaining timely cause of death statistics, BODRU in collaboration with multi-stakeholder partners has initiated a project to inform the development of an Electronic Death Registration System (EDRS). Initial findings are that EDRS could improve the timeliness, access and quality of cause of death data, and reduce burden on staff of the current paper-based system. Work as part of an international consortium on making a case for investing in routine health information systems (RHIS), has shown that such a system has potential to improve quality of care and have a large return on investment.

Equitable capacity development for empowering communities

BODRU continues to support capacity development and transfer of skills in burden of disease methodology essential to the work of the unit. Staff are encouraged and supported to pursue postgraduate studies to build skills relevant to the unit's needs. In the past year several staff members completed or are currently enrolled in postgraduate programmes, including 3 PhD studies, 2 masters and 2 post-graduate diplomas. Furthermore, one of our professional support staff is completing an undergraduate degree and GCP training is ongoing for all research staff.

BODRU staff are also mentoring and passing on their skills to the broader scientific community to grow the pool of people with research and burden of disease skills in the country through supervision of postdoctoral, doctoral and masters students. Senior staff, some of whom hold honorary positions as research associates and professors, are involved in undergraduate and postgraduate teaching at the University of Cape Town, Stellenbosch University, the University of the Western Cape, and the University of KwaZulu-Natal.

BODRU and collaborating universities have also developed a free online training platform to enhance the medical certification of cause of death by doctors on the death certificate and to address the lack of training in the International Classification of Disease (ICD) principles. The programme, which is compatible with computers, tablets and mobile phones, is divided into five modules and enables self-learning via voice-over recordings and downloadable reading materials. The programme is accredited for Continuing Professional Development (CPD) points by the Health Professions Council of South Africa (HPCSA) is available at www.deathcertification.org. By the end of March 2024, more than 2000 medical practitioners and students had registered, with more than 90% successfully completing the course.

Science for creating a healthier society

There were two major public engagements arising from our research during the last financial year. The first one from the findings of the National Cause of Death Validation study, which highlighted inaccuracies in the reporting of official statistics on injury deaths. Several media engagements and podcasts followed the publication of articles in the South African Medical Journal calling for changes to be made to the death certificate. On a practical level, the unit continues to pioneer training in improved certification of cause of death by medical doctors. The second major engagement centred on the release of the first study on male homicide in PLOS Global Public Health, which was part of a collaboration with the Gender and Health Research Unit. The findings were widely publicised nationally in several op-eds and in radio and television interviews. The following popular publications and media channel carried the stories: Daily Maverick, Groundup, Financial Mail, Cape Talk, SAFM, Radio 786, SABC News Channel 404, eNCA and Newzroom Africa.

In celebration of 30 years of democracy in South Africa

Monitoring the country's health status and determinants of disease is an essential foundation for guiding policy, programmes, and practice to improve life expectancy and quality of life. BODRU provides accurate and reliable estimates on the burden, pattern and associated risk factors of diseases in South Africa. We undertake research to improve population health information and surveillance systems; conduct methodological research to improve the basis of burden of disease (BoD) estimation and surveillance; and make BoD information available for national and sub-national health decision-making, policy and planning. We have already witnessed the impact of these data in guiding major policy decisions and responses to the HIV/AIDS epidemic and most recently the excess mortality arising from COVID-19. We remain committed to our multi-disciplinary approach to advance the provision of health measures, mortality estimates, health informatics and sentinel surveillance.

As we celebrate 30 years of democracy, we remain committed to the organisation's and the country's transformation agenda as attested to by our capacity development programmes.

BODRU hosts the World Health Organization-Family of International Classifications Collaborating Centre – maintaining WHO international classifications.

Attendees at the High Level Planning Meeting for the next South African Demographic and Health Survey, Pretoria.

Cochrane South Africa

Deputy Director:
Dr. Duduzile Ndwandwe

Prioritising responsive research through impactful interventions

During the 2023/24 financial year, our main goal during this period was to launch the GloPID-R Africa hub. This initiative aimed to ensure coordinated funding for pandemic preparedness in Africa. By addressing the critical issue of funding coordination, the GloPID-R Africa hub seeks to enhance Africa's ability to respond effectively to pandemics. Despite the challenges faced, we successfully launched the hub on in August 2023, laying the groundwork for improved pandemic preparedness and response across the continent.

Equitable capacity development for empowering communities

Throughout the 2023/24 financial year, Cochrane South Africa prioritised capacity development initiatives aimed at empowering both our staff and the broader community, with a focus on promoting equity and dignity in health research and healthcare. We organised regular training sessions and workshops to enhance the skills and expertise of our staff members, covering various aspects of health research methodology, evidence synthesis, and systematic review processes.

Within our unit, we promoted diversity and inclusivity, ensuring that all staff members had equal opportunities for professional development and advancement. Moreover, we fostered partnerships and collaborations with various organisations and institutions such as Oxford University, COMET Initiative to name a few, to expand our capacity development initiatives, leveraging their expertise and resources to reach a broader audience and have a greater impact.

Overall, these initiatives were instrumental in empowering both our staff and the community, thereby promoting equity and dignity in health research and healthcare.

Science for creating a healthier society

Cochrane South Africa actively engaged in offering knowledge translation and evidence-informed decision-making workshops with special focus on historically disadvantaged institutions like the University of Venda, University of Zululand and University of the Western Cape, taking our science and research out of the laboratory and into the community.

Feedback from these engagements has been overwhelmingly positive, with appreciation for the opportunity to learn about evidence-based healthcare and research methodologies. Participants have reported feeling empowered to make informed decisions about their health and have expressed a keen interest in further engagement with our team. Additionally, these interactions have provided valuable insights into the health needs and priorities of the community, helping to guide our research efforts and ensure that they are aligned with the needs of the populations we serve.

Overall, these engagements have been instrumental in bridging the gap between research and those who need information, ultimately promoting evidence-based healthcare and improving health outcomes.

In celebration of 30 years of democracy in South Africa

As South Africa celebrates 30 years of democracy, Cochrane South Africa reaffirms its commitment to promoting health equity, social justice, and evidence-based healthcare. We recognise that access to high-quality healthcare is a fundamental human right, and we are dedicated to ensuring this right is realised for all South Africans.

As we reflect on the progress made over the past three decades, we acknowledge the ongoing challenges and disparities that persist within our healthcare system. Therefore, our message is one of continued advocacy for health equity, inclusivity, and the importance of evidence-based decision-making in improving health outcomes for all South Africans. We remain committed to working collaboratively with partners and stakeholders to address these challenges and build our nation's healthier, more equitable future

Health Services to Systems Research Unit

Unit director:
Prof. Helen Schneider

Prioritising responsive research through impactful interventions

The aim of unit is to research, and build capacity to research, the contexts, mechanisms and processes through which initiatives to improve the accessibility, quality and equity of health services become integrated into the everyday practices of the routine institutional environment ("real-world" settings), and achieve sustainable coverage and impacts at scale, on the other hand. In the reporting period, the Health Services to Systems Research Unit undertook projects in the following areas:

(1) Health System Strengthening: Projects (i) Improving quality and outcomes through district health systems: Limpopo, Mpumalanga, Eastern Cape (ii) Health system development in the Western Cape since 2015: evaluation of the HC2030 strategy (iii) Sub-district leadership and management for health system strengthening: Bojanala district, North-West province.
(2) Governance of health systems and for health: Projects (i) Collaborative governance during public health emergencies: the case of Ebola in Uganda (ii) A policy-based structure for a health benefits package in SA.
(3) Community Health Systems. Projects (i) Capacities of EMS for collective action and collaboration with communities in the Western Cape (ii) Life-sustaining responses and everyday care work during the HIV/AIDS and Covid-19 crises in Cape Town.
(4) Gender and health systems, Projects (i) Partnerships for gender transformative co-design in Global Fund programming (WC) (ii) Implementation of Global Fund human rights mandate in a homophobic policy environment (Zambia) (iii) Global Financing Facility policy processes and country RMNCH plans (Uganda, Burkina Faso, Mozambique, Tanzania) (iv) Gender integration into large scale government programs in a sustained manner (Niger, Ethiopia).

Equitable capacity development for empowering communities

The Gender Transformation for Africa (GT4A) Collaborative, is an African-led partnership aiming to advance contextually informed research and policy translation on gender transformation for sexual, reproductive and maternal health (SRMH) across the continent. This Collaborative comprises 14 partners from 6 implementation research projects working in Gambia, Ghana, Niger, Burkina Faso, Nigeria, Malawi and South Africa, funded by the International Development Research Centre (IDRC). Ten (10) webinars co-convened as part of GT4A and the African Community of Practice on Gender and Health Collaboration with NACOSA and Hope Africa in supporting a learning partnership on gender transformative approaches with large-scale adolescent health programmes.

Science for creating a healthier society

In addition to the above, in 2023, we led the establishment of a new national knowledge network, the South African Learning Alliance for the District Health System, bringing together researchers and national and provincial decision-makers; and generated and disseminated a variety of knowledge products (scientific publications, webinars, and organised conference sessions).

In celebration of 30 years of democracy in South Africa

In the face of the enormous governance and other challenges currently facing the health system in South Africa, we have to recognise the many people – providers, managers, and citizens – who embrace public value and continue to make a difference. We have a responsibility to generate meaningful knowledge to enhance their capabilities in navigating complex realities.

Health Systems Research Unit

Unit director:
Associate Prof. Tamara Kredo

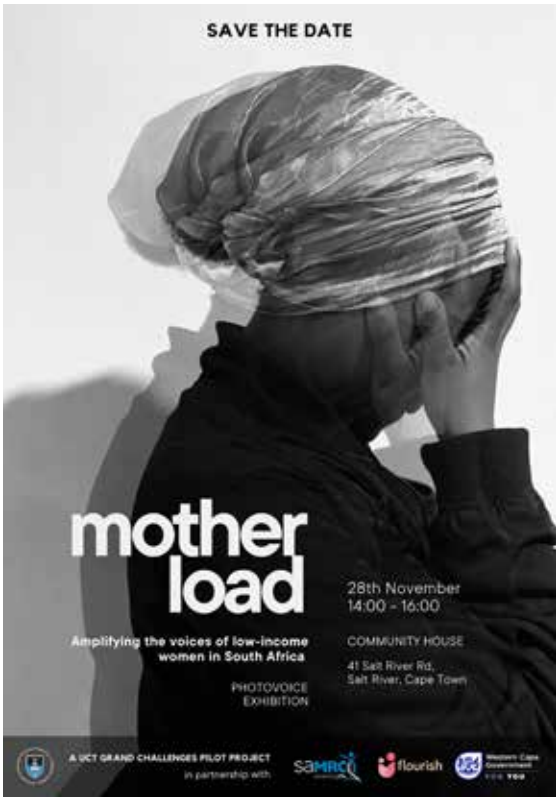
Prioritising responsive research through impactful interventions

The Health Systems Research Unit (HSRU) research contributes to evidence-informed health and social policy decision-making with the aim of achieving Universal Health Coverage (UHC) and Primary Health Care (PHC). We lead multi-disciplinary, intersectoral research across the health system (private-public sectors, health facilities, schools, community) and along the life course. This year has seen projects initiated and others progressing to inform key insights into health systems nationally, regionally and globally. We share some highlights here.

The National Health Insurance (NHI Bill) currently awaits final presidential sign-off. Health system financing is complex given South Africa's two-tiered public-private sector, the inequitable share of funding in the public sector and inefficiencies in both sectors. Dr Geetesh Solanki and colleagues produced a paper entitled ''South African Health Care Reforms towards Universal Health Care-Where to next" providing advice on the need for health-system strengthening regardless of financing mechanisms.

Professor Tanya Doherty leads the UKMRC-funded STAR study, a collaboration with UKZN and LSHTM. Researchers partnered with healthcare workers in maternity units in nine rural district hospitals for local problem-solving and intervention design to strengthen respectful care for women and newborns. Baseline research identified stark challenges in delivering respectful care for mothers and nurses. A multi-disciplinary team developed a toolkit and trained champions from each hospital to facilitate sessions designed to impact on person-centred care and organisational culture.

Adolescent girls and young women are a vulnerable population at high risk of HIV and unintended pregnancy. Dr Kim Jonas leads the HERStory 3 study, a national study evaluating the impact of the My Journey Programme – a combination HIV-prevention intervention, merging biomedical, behavioural and structural interventions – key strategy for achieving the Sustainable Development Goal to end the HIV epidemic by 2030. The evaluation includes 4800 participants and will inform national policy.



The Motherload exhibition held in Cape Town – Nov 2023.

2nd Project Africa Gradient workshop held in February 2024.

Equitable capacity development for empowering communities

HSRU staff facilitated five webinars, 20 lectures and seven workshops. Six masters and two PhD students graduated, and 42 students are currently being supervised. One of the PhD graduates, Dr Pereira-Kotze, was awarded the Miriam Labbok New Investigator Award for her paper on Legislation and Policies for the Right to Maternity Protection in South Africa: A Fragmented State of Affairs.

CWEL+ is a two-year, pilot, cluster-randomised trial funded by IDRC Canada, led by Dr Darshini Govindasamy and collaborators in the SAMRC Gender and Health Research Unit and Simon Fraser University. This is evaluating a combination of cash transfers plus economic-empowerment workshops for improving the well-being of caregivers of children and adolescents living with HIV. To date, 140 caregivers have graduated from the programme.

HSRU staff in Durban hosted the GENS job shadow programme which included 14 learners. The team provided an overview of the unit's work and learners visited a Durban field site to learn more about the research in mental health and well-being with caregivers and adolescents. They also hosted 15 undergraduate community-health students from the Durban University of Technology and 20 postgraduate public-health students from Africa and Canada as part of the UKZN/SANTHE programme. Students learned about conducting HIV implementation science with vulnerable groups.

The Global Evidence Local Adaptation (GELA) project invests in building skills and capacity of decision-makers and researchers to produce, use and adapt relevant evidence for informing guidelines for newborn and child health with a combination of structured and 'on-the-job' learning opportunities. GELA hosted an Evidence-to Decision Guideline Panel Simulation workshop for the South African Guideline Development Group. In addition, four students from Malawi, South Africa and Nigeria were awarded bursaries for the master's in clinical epidemiology at Stellenbosch University.

Science for creating a healthier society

Stakeholder engagement is essential for promoting awareness of issues and changes in health systems. We have contributed to enhancing transparency on the NHI Bill. The South African Portfolio Committee on Health held hearings on the Bill from 117 individuals, organisations and institutions. HSRU, together with other collaborators, collated the presentations, publishing a series of op-eds in the Daily Maverick (Part 1 – 6).

A Grand Challenges Pilot presented the Motherload Exhibition in Cape Town. A collaboration between the University of Cape Town, HSRU, the University of KwaZulu-Natal, Flourish (Grow Great Campaign) – a women's rights organisation, and the Western Cape government, the project's objective is to amplify the voices of low-income women. Employing the

photovoice method, this initiative sheds light on the day-to-day realities, challenges and needs of low-income women and their disproportionately heavy care burdens.

Additionally, the HSRU has been actively sharing its research with researchers, citizens and policy makers at national and international conferences. Nokwanda Sithole was awarded a Young Investigators Scholarship to attend the 12th International AIDS Society Conference on HIV Science. Stanley Carries, who received a EuroQol Early Career conference scholarship, and Dr Darshini Govindasamy, participated at the 15th IHEA World Congress in Health Economics. Audrey Moyo, a funded PhD student, was awarded best poster at the South African Association for Child and Adolescent Psychiatry and Allied Professions Congress.

In celebration of 30 years of democracy in South Africa

The HSRU's has a vision of building stronger health and social-care systems in South Africa, Africa and globally through collaborative health-policy and systems research that promotes equity and transformation. Research is a key pillar in strengthening health, social care and health systems. At the core of our strategy is advancing UHC, aligned with the SDGs. UHC recognises the rights of all people to access quality healthcare services where and when they require them without financial hardship. UHC cannot be achieved without commitment towards and enhancement of primary health care (PHC). Our research focus is therefore within PHC. Our strength is our expertise in high-priority content areas such as newborn, maternal and child health and nutrition, adolescent and young people's health. We conduct our research using a range of research and advocacy methods relevant for health policy and systems research including health economics analyses, social-policy research, evidence synthesis to inform policy questions, programme evaluations, and complex intervention design and implementation. By conducting research that is transformative, equity-oriented and takes African science leadership forward, we ensure that we align with global health priorities to impact people's health and well-being.

A learning session for the STAR project in KZN.

Global evidence Local Adaption Project GELA 9.

N Sithole awarded young investigators scholarship – July 2023.

HERStory3 study team with SAMRC Research support.

PUBLIC HEALTH INNOVATION

RESEARCH PROGRAMME 5

PURPOSE OF THE PROGRAMME

To promote the improvement of health and quality of life (impact prevention of ill health, improvement of public health and treatment) in the Republic of South Africa through innovation, and technology development and transfer.

UNITS THAT CONSTITUTE THIS PROGRAMME

1. Biomedical Research and Innovation Platform (IRU)
2. Drug Discovery and Development Research Unit (ERU)
3. Genomics Platform (IRU)
4. Herbal Drugs Research Unit (ERU)
5. Pan African Centre for Epidemics Research Unit (ERU)
6. Primate Unit and Delft Animal Centre (IRU)

PROGRAMME STRATEGIC OBJECTIVES

- To establish key modern technology (enabling) platforms to facilitate generation of new drug discovery knowledge through world-class applied research.
- To establish and manage research laboratories and facilities as state-of-the-art national research facilities for research and development.
- To train and mentor a new generation of high-quality postgraduate students and Postdoctoral Fellows in multi-disciplinary research, and in so doing, equip them to compete in the science and/or education sectors nationally and internationally.
- To strengthening research and development to build on and enhance public health innovation.
- To increase the body of scientific knowledge through research translation into products, patents, research papers, policy, practice and health promotion (including to the general public).
- To increase the number of health-care innovations and to produce patents based on new discoveries and new research methodologies.

RESEARCH HIGHLIGHTS UNDER THIS PROGRAMME

Prioritising responsive research through impactful interventions

In the 2023/24 financial year, the Biomedical Research and Innovation Platform (BRIP) embarked on several pioneering research endeavours aimed at addressing the health challenges of South Africans and advancing medical knowledge. While traditionally focused on cutting-edge pre-clinical research in non-communicable diseases (NCDs), BRIP expanded its scope to include innovative clinical studies, particularly in the realm of African Traditional Medicine (ATM), reflecting a commitment to addressing health disparities and harnessing indigenous knowledge.

BRIP and its partners have developed a pharmaceutical-grade green rooibos extract, Afriplex GRT™, with demonstrated pre-clinical health benefits. For the first time BRIP will perform a phase 1/2 study to assess the safety, tolerability, and pharmacodynamics of Afriplex GRT™ in healthy volunteers and adults with insulin resistance and/or hyperlipidaemia. The second study is a randomised controlled trial exploring the effects of Baobab fruit powder on gut and cardiometabolic health in obesity. Both studies have South African Health Products Regulatory Authority (SAHPRA) approval, which represents a significant step towards establishing the scientific foundation for using ATM in promoting public health. Furthermore, BRIP spearheaded a multidisciplinary collaboration funded by the European Research Area Network for Personalised Medicine scheme, emphasising the importance of international cooperation in tackling global health challenges. The study uniquely combines proteomics and metabolomics to identify known and novel ethnic- and sex-specific biomarkers that will improve early prediction of type 2 diabetes in European and African populations. By elucidating these biomarkers and their relationship with dietary intake, the study aims to inform personalised preventive strategies tailored to diverse populations, with a keen focus on cost-effectiveness and community perceptions.

By generating robust evidence for the efficacy and safety of ATM and elucidating novel biomarkers for diabetes prediction, BRIP is poised to make significant contributions towards improving health outcomes and reducing the burden of NCDs on a global scale.

Equitable capacity development for empowering communities

BRIP has developed a strong track record of capacity development through collaborations with South African Universities, including historically disadvantaged institutions (HDIs) such as the Universities of Zululand and Limpopo. In the 2023-2024 fiscal year, BRIP celebrated 12 MSc and PhD graduates (10 female, 3 Black African), who gained skills and expertise doing cutting-edge research in fields of molecular biology, epigenetics, and 3D cell culture. These capacity development efforts are supported by 7 post-doctoral fellows (5 females, 2 Black African), who are mentored and trained by

BRIP scientists. To strengthen BRIP's clinical research portfolio, 6 female staff members successfully completed the "Clinical Investigator Certification Good Clinical Practice" course presented by the Fundisa African Academy of Medicines Development in April 2023.

During the 2023/24 fiscal year, the SAMRC/Chan Soon-Shiong Family Foundation (CSSFF) Biopharmaceutical Manufacturing Training Studentships programme hosted the first two cohorts of trainees. This initiative, a partnership between CSSFF and the SAMRC, aims to build a skilled workforce for Biopharmaceuticals and vaccine manufacturing on the African continent and includes studentships, scholarships, and post-doctoral fellowships. The implementation of the studentship training curriculum was spearheaded by BRIP scientists and 27 trainees predominantly from HDIs successfully completed the programme in 2023, with 65 % of trainees securing a placement with industry partners.

BRIP retained 4 Black African trainees (2 females) as interns to assist in the programme. The curriculum comprised intensive skills development with a focus on practical components (80 %) and theory (20 %) at BRIP as well as at academic partners (Universities of Cape Town and Stellenbosch) and industry partners. To further equip individuals with the knowledge and skills to adhere to stringent quality standards throughout the manufacturing process, 3 BRIP scientists and the interns completed a course on Good Manufacturing Practice at Immunity Bio in California, USA, in August 2023.

Science for creating a healthier society

In October 2023, BRIP hosted its 13th Annual BRIP symposium, a platform for emerging young scientists to share their research and gain invaluable input from peers and mentors. The 2023 theme was "Empowering Young Minds for a Transformative Future" and garnered interest from across the country, with our largest number of registered participants (152) to date. Students from the Universities of Cape Town, Western Cape, Limpopo, Zululand, Sefako Makgatho Health Sciences, Stellenbosch, Nelson Mandela and Cape Peninsula University of Technology participated in the event. The hybrid platform allowed for in-person and online participation from local and international (Denmark and Spain) speakers.

Annually on the 14th of November, global communities commemorate and raise awareness about the burden and management of diabetes. As part of an awareness campaign, BRIP, alongside the Non-Communicable Research Unit (NCDRU) and Corporate and Marketing Communications Division, promoted physical activity at their Fun Walk at Jack Muller Park in Bellville. BRIP scientists also presented an information session at a Senior Citizen's residence in Parow as part of the World Diabetes Day Campaign.

Attendees at the 13th Annual Biomedical Research and Innovation Platform Symposium held in October 2023.

Members of the public and SAMRC staff participating at the SAMRC's Annual World Diabetes Day fun walk.

Additionally, in collaboration with the Association of South African Women in Science and Engineering, scientists from BRIP visited Wesbank Secondary School in Malmesbury, for a 2-day outreach program to inspire and empower high school girls from disadvantaged communities. Students showcased their own scientific innovations and were afforded demonstrations by scientists from BRIP and local universities (Universities of Stellenbosch, Western Cape and Cape Town).

In celebration of 30 years of democracy in South Africa

As South Africa marks 30 years of democracy, BRIP remains unwavering in its commitment to nurturing an inclusive, empowered, and transformed workforce. BRIP has undergone a profound shift in its demographic makeup; in 2006 the Platform compromised of 57% White and 42% Coloured employees. Since then, the Platform has diversified towards a more inclusive workforce with 30% Black African, 25% Coloured, 25% Indian and 20% White permanent employees in 2023. This transformation represents BRIP's efforts to foster a work environment that is inclusive and reflects the rich diversity of our country.

BRIP will continue its commitment to capacity building in the field of science and technology. This commitment is exemplified by its participation in the training programme sponsored by the Chan Soon-Shiong Family Foundation (CSSFF), which aims to train young African scientists in preparation for the biopharmaceutical manufacturing industry.

As the country celebrates three decades of democracy, BRIP pledges to continue its commitment to transformation, education and skills development. By creating a workforce representative of the country's demographics and developing the next generation of health scientists, BRIP is steadfast in its dedication to fostering an empowered workforce that will strengthen research "In Africa, for Africa, by Africans."

BRIP's staff engaging with the public as part of celebrating National Science Week.

Drug Discovery & Development Research Unit

Unit director:
Prof. Kelly Chibale

Prioritising responsive research through impactful interventions

The main goals and important projects for the Drug Discovery and Development Research Unit in the 2023/24 financial year mainly revolved around two themes: The repurposing of cancer drugs for malaria and the development and the deployment of Artificial Intelligence (AI) and Machine Learning (ML) tools to bring efficiency to drug discovery projects.

The overarching goal of the repurposing study is to investigate whether clinically relevant cancer drugs can be repurposed for the treatment of malaria. Several human kinase inhibitors that are in various phases of clinical development for cancer therapy have demonstrated activity against the human malaria parasite Plasmodium falciparum. These anti-cancer kinase inhibitors are often associated with adverse drug reactions, not only owing to the nature of the molecular drug target, but also due to the high dose and long duration of treatment that is used in the oncology field. Notwithstanding this, it is hypothesised that a relatively lower dose coupled with a shorter length of treatment will be required for an acute malaria infection, which could potentially alleviate the off-target activity and toxicity that is observed during chemotherapy. To this end, human dose predictions can be performed to provide evidence to support whether human anti-cancer kinase inhibitors can be repurposed for use in malaria. The potential impact is the provision of a cost-effective approach to accelerating the development of treatments with novel clinical use, as the clinical safety of the cancer drug has already been demonstrated.

Using the unit's historical data, a cascade of AI/ML models that mimics the experimental anti-malarial and anti-tuberculosis drug screening pipelines were successfully developed and deployed. The impact achieved during the reporting period was significant improvement in the efficiencies of the screening processes resulting in an overall acceleration of the drug discovery processes.

Equitable capacity development for empowering communities

The unit has concluded a fruitful year of capacity building and training initiatives. This has also resulted in a tangible increase in interest in drug discovery research both in South Africa and on the African continent. The following items are key highlights from the past year:

(1) The unit approached two South African Historically Disadvantaged Institutions (HDIs), University of Limpopo and University of Venda, to support them to submit 3-year drug discovery project proposals. Both proposals were awarded, with 80% of the funding going to the HDI, with the remaining 20% coming to the unit to allow the HDI full access to the unit's platform services and support for the students to work at the unit for periods of their project. The unit supported visiting researchers from both institutions during 2023.

(2) In partnership with the Bill and Melinda Gates Foundation (BMGF), Medicines for Malaria Venture (MMV) and the University of Dundee Drug Discovery Unit, launched the Ghana Drug

Discovery Hub in June 2022. BMGF granted 3-years of funding to three institutions in Ghana, University of Ghana, Noguchi Memorial Research Institute and Kwame Nkrumah University of Science and Technology (KNUST). The unit is providing mentorship, training support and access to our drug discovery platform to support the Ghanian scientists.

(3) The Grand Challenges Africa Drug Discovery projects continued through 2023. These are supported by the unit in partnership with the BMGF, MMV and Science for Africa Foundation (SFA). Support was provided to the grantees from University Pretoria (South Africa), North-West University (South Africa), Chinhoyi University of Technology (Zimbabwe), Universite de Sciences des Techniques et des Technologies de Bamako (Mali), Kenya Medical Research Institute (Kenya), SAMRC (South Africa), and Stellenbosch University (South Africa).

Science for creating a healthier society

The unit continued to focus on raising awareness and promoting drug discovery in Africa. by participating in a number of high-profile events both in the scientific communities and in the general public to promote awareness around drug discovery in Africa. These include The 2022 H3D Symposium: Celebrating over a decade of African-led infectious disease drug discovery to enhance global health; Local Innovation Advances Health in Africa; Including African data in drug discovery and development (Nature); Unlocking the potential of AI in drug discovery; Face to face – 'Fail your way to success', says prof behind pioneering drug discovery group at UCT in The Daily Maverick, and; Our youth dividend will usher-in the next Africa renaissance news article in IOL.

The unit hosted an Open Day on 21st October 2023 which was attended by 60 students from local institutions interested in learning more about drug discovery careers. The Director and Dr Susan Winks co-hosted a side event with the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) on Powerful, locally driven partnerships for health innovation in Africa, at the Conference for Public Health in Africa in Lusaka, Zambia, 7th November 2023.

In celebration of 30 years of democracy in South Africa

The unit has pioneered exciting new initiatives, which are in the pipeline and the unit continues to shine like a bright light, not only demonstrating what is possible on the continent but also leading the research innovation to build the drug discovery industry in Africa, with the goal of improving the health of its people as well as create science jobs and a sustainable culture of modern integrated drug discovery in Africa.

Ghana Drug Discovery Hub.

Grand Challenges Cohort.

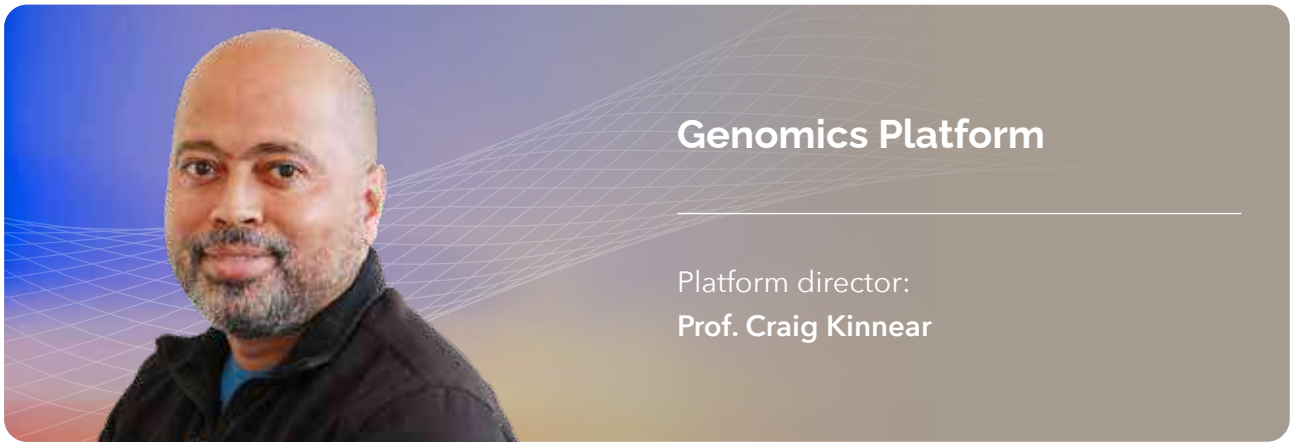
Grand Challenges Project.

Undergrad and postgrad students at the H3D Open Day.

Attendees at the H3D Foundation and IFPMA official side event of the 3rd International Conference on Public Health in Africa.

Re-purposing cancer targets for malaria research.

The Drug Discovery and Development Research Unit approached two HDIs, University of Limpopo and University of Venda, to support them to submit 3-year drug discovery project proposals.



Genomics Platform

Platform director:
Prof. Craig Kinnear

Prioritising responsive research through impactful interventions

The SAMRC Genomics Platform (SGP) was established to offer affordable, high-quality next-generation sequencing (NGS) services to African scientists. While primarily focused on delivering NGS services, SGP is engaged in precision medicine research, utilising whole exome sequencing (WES) to identify disease-causing variants in patients with immune disorders and developmental issues. The aim is to enhance patient treatment and management through precise diagnoses.

In developed countries, WES is a primary diagnostic tool for genetic disorders, significantly reducing diagnostic timelines. However, in South Africa, patients face barriers accessing WES due to limited clinical genetics units, insufficient integration of genetic testing in standard care, and the high cost of WES testing, which isn't covered by the state healthcare system.

To address these challenges, SGP launched the Exome Sequencing Diagnostic Initiative (EDDI) to integrate WES into the South African healthcare system. A pilot study aims to develop practical clinical WES workflows and assess its feasibility as a first-tier diagnostic tool. Phase one involves optimising WES sequencing strategies to lower costs while maintaining quality.

The next phase will sequence 200 patients' exomes from the State Healthcare System to evaluate WES's diagnostic utility, considering factors like positive diagnoses, time to diagnosis, and cost per test. Tailored clinical WES workflows will be developed for the South African context. This initiative is expected to advance precision medicine in South Africa by addressing knowledge and infrastructure gaps, advocating for the integration of precision medicine into routine care for genetic disorders. Additionally, it will bolster next-generation sequencing capacity and provide bioinformatics and variant interpretation training for young scientists, enhancing the country's genomics capabilities. Ultimately, EDDI aims to improve patient outcomes by facilitating timely and accurate diagnoses through WES within the South African healthcare system.

Equitable capacity development for empowering communities

In response to the COVID-19 pandemic, the SAMRC initiated the Wastewater Surveillance and Research Programme to predict infection waves and track SARS-CoV-2 variants. To broaden surveillance, SAMRC partnered with six local institutions. These institutions unfortunately lacked sequencing capacity. To address this, the SAMRC partnered with DIPLOMICS to establish the Broadening Access to Sequencing in South Africa (BASSA) programme. BASSA aimed to empower these institutions with portable sequencing equipment and training.

In August 2023, a workshop at the DIPLOMICS training laboratory provided training for one participant from each partner institution, supplying them with portable ONT MinION sequencers and necessary peripheral equipment for sample preparation and sequencing. This initiative aimed to decentralise sequencing capabilities, enabling local monitoring of SARS-CoV-2 variants.

In addition to BASSA, SAMRC and DIPLOMICS collaborated on the SAMRC-DIPLOMICS Internship Programme. This initiative addressed the shortage of trained NGS technologists in South Africa by providing hands-on training. Three interns received comprehensive training in DNA/RNA extraction, library preparation, and sequencing at SGP, subsequently integrating into SGP's operations. The internship programme's success was evident, with interns securing positions or postgraduate opportunities in the NGS field. Moreover, the SGP served as a local training facility for field application specialists (FAS) and field service engineers from NGS service providers. Through an open-door policy, the SGP provided training opportunities for over 20 individuals from institutions outside SAMRC in 2023, contributing to the development of NGS expertise in South Africa.

These initiatives collectively aimed to democratise access to sequencing technologies, strengthen local capacity in genomic surveillance, and address skill shortages in the NGS workforce. Through collaborative efforts, the platform aims to enhance South Africa's ability to respond to public health challenges such as the COVID-19 pandemic effectively.

Science for creating a healthier society

Instead of taking science out of the laboratory to the community, the approach at the SGP is to allow the community into the laboratory. We have an open-door policy that attracted several community members to visit our laboratories to gain better insight into genomics.

We were one of the SAMRC laboratories that participated in the SAMRC GenS Job-Shadow programme. In June 2023, we hosted four high school learners for one week. During this time, the learners were able to interact with our staff and learn how a Genomics facility functions. The aim of this was to allow the learners to experience the day-to-day operations of a Genomics laboratory by job-shadowing staff members and performing basic experimental procedures. The feedback received was positive with many of the learners appreciating the opportunity to be able to have some hands-on practical experience. Additionally, they felt that it gave them better insights into the world of genomics, a field that they had not previously considered as a career choice. The SGP also hosted learners outside of the Gen-S programme throughout the year.

Our team has engaged with local media houses like News24, who have a wide readership as well as with international news agencies to promote and to inform the public of our work.

The Broadening Access to Sequencing in South Africa (BASSA) workshop.

In celebration of 30 years of democracy in South Africa

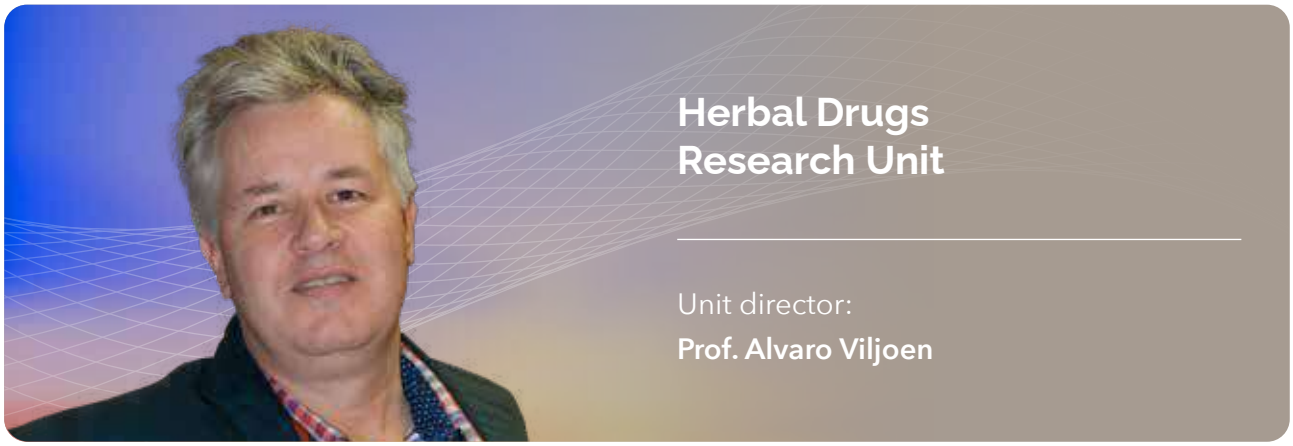
As South Africa celebrates 30 years of democracy, the Genomics Platform commits to continuing to drive precision medicine to benefit all South Africans. Cost remains a barrier to genetics services for most South Africans, so we will develop innovative ways to make NGS more affordable. Furthermore, we commit to research aligned with National health priorities. We further commit to be at the forefront of South Africa's response to the 2022 WHO's guidelines on genomics implementation. We are positioned to make key contributions within three of the four broad themes of the "Accelerating access to genomics for global health" report.

Additionally, we aim to continue the promotion of genomics through advocacy: Based on the number of samples sequenced and committed for 2024 and beyond, the SGP is a key driver of NGS in the South African market. Our membership in the DIPLOMICS network of service laboratories allows us to engage with NGS providers and funders to improve market access.

As one of South Africa's leading NGS laboratories, we identify and overcome barriers to genomics implementation. We train research technologists and postgraduate students and provide equipment and infrastructure to train South African NGS professionals. As a DIPLOMICS partner laboratory, the SGP fosters good relationships with other DIPLOMICS laboratories to enable genomics research in South Africa. This network encourages collaboration between partner laboratories, and we conduct our business with this in mind.

Mr Thabede being trained on how to load the new MGI-G99 sequencer.

Dr Viraragavan engaging with students during the Generation Science job shadowing programme.



Herbal Drugs Research Unit

Unit director:
Prof. Alvaro Viljoen

Prioritising responsive research through impactful interventions

The main goal of the Herbal Drugs Research Unit is to conduct technologically advanced scientific research, and to make basic knowledge readily available to stakeholders, to promote the quality, safety and efficacy (QSE) of herbal medicines. The safety and efficacy data on phytomedicines are far from sufficient to meet the criteria needed to support their use worldwide. This lack of research data can be attributed partly to the fact that health care policies have neglected to adequately address phytomedicines. However, the absence of appropriate or accepted research methodology for evaluating traditional and herbal medicines remains the biggest stumbling block to the commercial development of phytomedicines. The unit uses modern technology to add substantial value to assist in developing some of South Africa's botanical assets into commercial products. In this way, the unit may be instrumental in unlocking and advancing the possible socio-economic value of our indigenous resources to the benefit of all South Africans.

The ongoing research is of a multi-disciplinary nature and seeks to address aspects of pharmacology, phytochemistry and toxicity of popularly used medicinal plants, thereby contributing to evidence-based use of these plants. Various postgraduate research projects are underway where modern in vitro and in vivo models are employed to assess biological activities and toxicity. The use of state-of-the art instrumentation has contributed to the unit becoming a leader in chemical profiling of medicinal plants, an important aspect of quality control. This research encourages the development of the herbal products industry in South Africa, which benefits members of the public (users), the regulator (SAHPRA) as well as industry in general.

Equitable capacity development for empowering communities

The unit, based at a University of Technology, seeks to produce future-ready postgraduate students/researchers who are fully equipped and skilled in various aspects of medicinal plants research, to further the agenda of integrating traditional medicines into primary healthcare, globally. Currently, the unit has 11 registered PhDs, 11 masters and 2 postdoctoral fellows. During the reporting period, two female South African females graduated, one with a PhD and the other a masters degree. In order to address gender disparities and transformation, the unit actively prioritises recruiting African females, who currently constitute 50% of the total postgraduate compliment. Furthermore, the unit aims to assist academic staff to further their qualifications and to date, 5 African females have graduated (4 PhDs, 1 masters) and two are currently busy with their PhD projects.

Science for creating a healthier society

The research outputs produced is intended to improve knowledge on medicinal plants that are currently used in African traditional medicine systems. This information is of benefit to the general public who have shown interest in the use of indigenous plants for healthcare. By providing guidelines for the quality control of herbal raw materials, we aim to encourage production of high-quality products that are attractive to the international community, and to grow the local industry. In line with this, the

unit published a book 'The South African Herbal Pharmacopoeia: Monographs of Medicinal and Aromatic Plants' which is a comprehensive, up-to-date literature review of 25 medicinal plants of South Africa, with in-house developed quality control protocols for chemical fingerprinting and biomarker identification, as well as updated safety profiles. Academic research in pharmacy and analytical chemistry will benefit from the detailed chemical profiles of each species documented. Industrial manufacturers of herbal products, herbal medicines, cosmetics, food supplements, and national and international policymakers and regulators will also benefit from the 25 book chapters produced. The Unit Director took the initiative to market the book and ongoing research at both national and international levels, through presentations under the themes: 'Compiling the first South African Herbal Pharmacopoeia – an important step in the globalisation of South African medicinal plants' and 'The application of classic and modern pharmacognosy in monographing African traditional medicines – a botanical travelogue'.

In celebration of 30 years of democracy in South Africa

The lack of access to healthcare services, combined with the erosion of traditional healing practices, contributed to the health disparities experienced by Black South Africans. Despite the challenges posed by our history, the unit remains committed to making efforts to reclaim and revitalise traditional knowledge about medicinal plants in the country, as well as promote their safe use for primary healthcare. There is a growing need to incorporate traditional medicines into the broader healthcare system and the unit seeks to make traditional medicines more acceptable by establishing quality standards as well as confirming efficacy and safety, through laboratory testing.

Furthermore, historically, the education, training and research in medicinal plant research has not been rendered due attention and support. The unit therefore commits to further improving capacity development through postgraduate training and empowering academic staff while targeting previously disadvantaged populations.

Lastly, Botany departments have been at the forefront of pharmacognosy research in South Africa, while pharmacy schools have not embraced this opportunity. The unit aims to advocate for the integration of traditional medicine into pharmacy curricula for the profession to acknowledge the value of traditional healing practices which has the potential to inform healthcare practice, policy, and regulation in the country.

Pan African Centre for Epidemics Research Unit

Unit director:
Prof. Refilwe Phaswana-Mafuya

Prioritising responsive research through impactful interventions

Pan African Centre for Epidemics Research Unit (PACER) has unique scientific premise. The reliance on a general population-oriented approach to guide programmes has limited the impact of epidemic responses in settings like South Africa. PACER endeavours to understand the degree to which a tailored epidemic response, sensitive to heterogeneity, can effectively and efficiently impact policy and practice. PACER uses innovative methods and approaches to answer research questions that may not be answered through conventional methods only- e.g. big data, machine learning, Integrated analysis, small area estimations, and transmission modelling, while also applying statistical and epidemiologic methods attuned to data structure, e.g. cross-sectional and longitudinal analyses. In this regard, PACER is pursuing innovative and ambitious projects that leverage novel methods to analyse large and underutilised datasets to answer new questions towards a more empiric and ultimately more effective HIV pandemic response. The projects are underpinned by scientific excellence, public health significance, multi-disciplinarity, innovativeness, local relevance, global competitiveness, and impact and include:

(1) Harnessing big data to evaluate the potential impact of HIV responses among key populations in generalised epidemic settings in SSA. (2) Leveraging Big Data Science to Focus the HIV Response in Countries with Generalised HIV Epidemics. (3) Epidemiologic analyses of the impacts of COVID-19 on HIV prevention, diagnostic and therapeutic services among key populations.

Equitable capacity development for empowering communities

PACER has a strong capacity-building component to support equitable scholarship. The unit provides much-needed research capacity development through developing epidemiological and public health capacities in handling epidemics and pandemics among emerging researchers and postgraduate students. A range of capacity-building activities were explored in 2023 for skills transfer including postgraduate training and supervision, publication co-authorships, joint scientific presentations, provision of mentorships, supporting career progression and fellowships, e.g. PACER hosted two John Hopkins University students for 4 months (2023) as interns; PACER

Research Mentorship: PACER hosted one Senior Lecturer from the University of Fort Hare.

PACER PhD student – Ms Sebati receiving the SAWISA Award.

Awards and Recognitions: PACER PhD students and Postdoc fellow received various awards in 2023.

exposed its postgraduate students (MPH, doctoral and postdoctoral research fellow) to about 35 UJ postgraduate capacity building workshops and seminars; hosted one University of Fort Hare emerging researcher for two weeks.

The PACER Director provided technical advice to UNIVEN Executive Dean Faculty of Health Sciences and UNIVEN Deputy Dean Research and Innovation. Also, PACER emerging researchers' mentor young scientists at the Eskom Expo, transferring their skills to the upcoming young generation who seek to embark on public health-related careers. Lastly, the Unit Director has presented over 10 webinars in 2023 on various platforms including Universities South Africa, Future Professors Programme, Black Women in Science, Organization for Women in Science in Developing Countries, Women in Physics South Africa, STEM MentHER, HERS-SA, SCIBONO, among others. PACER Director serves as MSc lecturer at the Pan African University of Life and Earth Sciences Institute. She also serves as a Scientific Advisory Committee Member of the Africa Health Research Institute (AHRI), and expert panellist.

Science for creating a healthier society

PACER disseminated scientific results through various platforms including stakeholder engagements, radio and TV interviews and media blogs. Consequently, the Unit Director was awarded a certificate as a finalist for the NSTF-South32 Communication Award. Additionally, the Director was recently featured in a media blog entitled "The Global AIDS Fight Has a Data Problem". Further, the Unit Director launched two open access books in 2023 aimed at empowering and inspiring emerging researchers in their career journeys, namely:

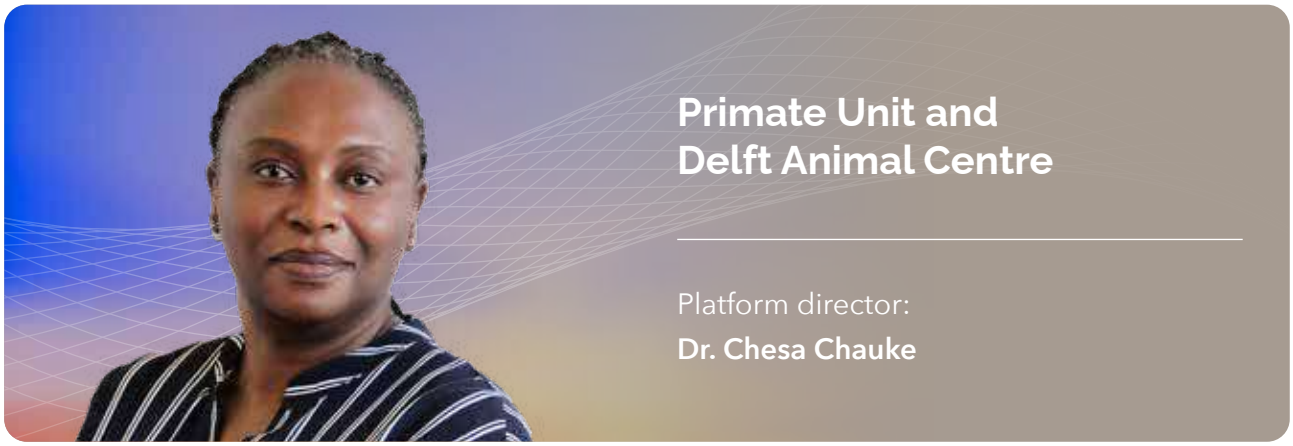
Navigating academia: Women's stories of success and struggle – A call to action. In the first 2.5 months, Navigating academia made waves – 678 abstract views, 281 file views, 277 pdf downloads Research Mentorship: A Developmental and Transformational Tool in Shaping and Sustaining African Women's Career Progression in Academia. The two books are open-access, double-blind peer-reviewed available in print, electronic & audio in more than 20 platforms including: UJ Press website, Directory of Open Access Books, EBSCOHost, Amazon, Takealot, Web of Science.

PACER hosted two interns from the Johns Hopkins University.

PACER also ensures knowledge translation through serving on the SANAC HIV Estimates Technical Working Group, SANAC KP Technical Working Group, NDoH STI Technical Working Group. Ms Betty Sebati's work was showcased on the UJ, NRF, SAMRC, DSI, ASSAF, BWIS, Ubuntu Radio Opinion piece on securing a child's future through ART treatment and support by Apiwe Nightingale Health Expert interview on Tabaa usage in Gambian Women by Musa Jaiteh. PACER Director serves in the following panels African Health Research Institute Scientific, World Congress of Epidemiology, Medical Research Foundation, University of Münster, Advisory Board Member.

In celebration of 30 years of democracy in South Africa

The response to HIV in the country has been largely generalised. This has led to missed opportunities to scale up what works, misallocation of resources, and perpetuated inequalities that undermine the HIV response. Equity in health and health care necessitates a targeted response to current pandemics and for future pandemic preparedness. This requires the provision of timely information at a level and scale that will improve understanding of HIV heterogeneities for greater impact.



Primate Unit and Delft Animal Centre

Platform director:
Dr. Chesa Chauke

Prioritising responsive research through impactful interventions

The primary objective of the Primate Unit and Delft Animal Centre (PUDAC) is to provide the infrastructure and technical/scientific capacity to utilise laboratory animal models (non-human primates and rodents) for a broad spectrum of research initiatives. The platform had two important goals for 2023/24 which were divided into operational and self-initiated research.

Operational/Infrastructural developments – The operational focus was to comply with the SANS/SAVC guidelines by making sure that our infrastructural development is up to date. During the refurbishment of the animal units (experimental building, animal corals, HVAC, autoclaves etc.), several challenges involving contractors and sub-contractors were encountered, which resulted in the delay for the renovations to be completed in the experimental building [Animal Biosafety Laboratory (ABSL-2)]. However, progress has been made and renovations of the rodent section were completed, including the installation of two autoclaves.

Non-communicable diseases (NCDs) – PUDAC provided technical support and conducted NCD research projects for UWC and BRIP. Complementary to the core business, PUDAC conducted three self-initiated projects of which one has been completed (Obesity) and two are ongoing to accommodate PhD students. The objectives of these projects were to identify obesity biomarkers using obese non-human primates and cathepsin S inhibitors from South African medicinal plants. However, the initiation of some of the highlighted objectives for these ongoing projects was delayed due to financial constraints, which is now resolved through research grants.

Communicable diseases – Previously, PUDAC successfully established a rhesus macaque virus challenge model for evaluation of candidate HIV vaccines and HIV/AIDS related research. To this end, we recently evaluated candidate HIV vaccines that were developed by UCT researchers. We are currently continuing with the second phase which focuses on the investigation of the impact of concurrent schistosomiasis on the efficacy of these candidate vaccines, with a PhD student being trained on this project.

Equitable capacity development for empowering communities

PUDAC is active in the staff development programmes and continues to enhance research capabilities in the animal technology and scientific field using suitable animal models. We encouraged and supported our staff to attend courses, conferences and workshops to enhance their personal and career developments. This effort has assisted us in training and empowering young postgraduate students, scientists, animal technicians and technologists with unique skills in their respective fields. Therefore, the capacity development initiatives also allow PUDAC to continue monitoring and identifying areas of skill development for personal and career growth.

In this reporting period, 6 PUDAC staff members were enrolled with the Institute of Animal Technology (IAT) and one technologist has passed a level-2 diploma. The aim of this IAT programme was to equip our animal technicians and technologists to be able to provide excellent research support to our

internal and external clients. The IAT course is also aligned with the SAVC requirements (animal staff authorisation). In addition, PUDAC is also supporting 3 PhD students and 1 MBA (Administrator). Courses attended by scientists/students in the reporting period focused on research ethics, next-generation sequencing, cheminformatics, coding, and research proposal writing. A senior scientist was appointed by the International AIDS Society (IAS) as a mentor for the second year in a row to participate in its 2023 Mentorship Programme. The Programme links a senior or established researcher (mentor) in the HIV/AIDS field with an early-career or a postgraduate student (mentee) in the same field for an IAS-supported virtual mentorship programme for 6 months, culminating in a face-to-face meeting in the next IAS conference which is funded by IAS. A PUDAC-hosted PhD student benefited as a mentee from the same IAS mentorship programme. In addition, the same PUDAC senior researcher was appointed as a reviewer of the IAS 2024 conference applications for sponsorship.

Scientist at molecular biology lab preparing samples for PCR purification.

A researcher at the PUDAC vaccinology lab.

Science for creating a healthier society

As an animal research platform, we have limitations on what we can share with the public due to the sensitive nature of our work. However, we have contributed to knowledge generation through the use of our animal models, and we have disseminated our research findings in the form of conference presentations, publications and stakeholder meetings. One of our Senior Researchers Dr Gerald Chege wrote an article for a general audience on the use of non-human primates in HIV/AIDS research which was featured in the South African Immunology Society (SAIS) Newsletter (spring edition). Our Unit Director, Dr Chesa Chauke, was appointed to chair the Research Ethics Committee Association of Southern Africa (REASA) whose role is to promote the philosophy and practice of ethical human and animal research in Southern African countries. Dr Chauke is also serving as a committee member of NHREC which is mandated to formulate policies that guide and regulate the research ethics committees in South Africa.

In celebration of 30 years of democracy in South Africa

As we celebrate 30 years of democracy, PUDAC is committed to providing scientific excellence and striving for the highest standards of quality and integrity in all ethical aspects of providing appropriate infrastructure and animal research models for biomedical research as well as experimental design, data analysis, and interpretation. Although we have faced adversity in the past three decades, let us now be joyful and celebrate this liberation by advancing people's health. It is time to come together to devise strategies that will help to improve the lives of our communities. We might not be in a political space, but through our research, we have the means to influence health policies that the government implements.

BIOMEDICAL RESEARCH

RESEARCH PROGRAMME 6

PURPOSE OF THE PROGRAMME

To conduct basic research, applied research and transactional research to determine predisposition to disease. This understanding is important for planning effective intervention and disease control.

UNITS THAT CONSTITUTE THIS PROGRAMME

1. Antiviral Gene Therapy Research Unit (ERU)
2. Bioinformatics Capacity Development Research Unit (ERU)
3. Cardiometabolic Health Research Unit (ERU)
4. Genomics of Brain Disorders Research Unit (ERU)
5. Platform for Pharmacogenomics Research and Translation Research Unit (ERU)
6. Precision and Genomic Medicine Research Unit (ERU)
7. Precision Oncology Research Unit (ERU)
8. Stem Cell Research and Therapy Research Unit (ERU)
9. Wound and Keloid Scarring Translational Research Unit (ERU)

PROGRAMME STRATEGIC OBJECTIVES

- To generate scientific knowledge in the field of biomedical science, which will provide insights into various diseases of national priority. This in turn will lead to novel diagnostic, preventive and therapeutic strategies.
- To undertake original research of high quality, which will provide novel insights into acute and chronic inflammatory diseases of national priority, thus leading to novel diagnostic, preventive and therapeutic strategies.
- To train and mentor high-quality postgraduate students who are able to compete in the science, health and/or education sectors locally and abroad.
- To strengthen biomedical research through a policy of enabling researchers from other academic institutions to have access to sophisticated laboratory equipment and supervision. In addition, to provide assistance to national research funding agencies with respect to evaluating applications for research funding.
- To translate research data into policy and practice regarding prevention, diagnosis, treatment and management of diseases.
- To develop and test biomedical innovations that will address various conditions.
- To develop health-care management systems and plan a 'gene therapy' intervention programme for retinal degenerative diseases.

RESEARCH HIGHLIGHTS UNDER THIS PROGRAMME

Prioritising responsive research through impactful interventions

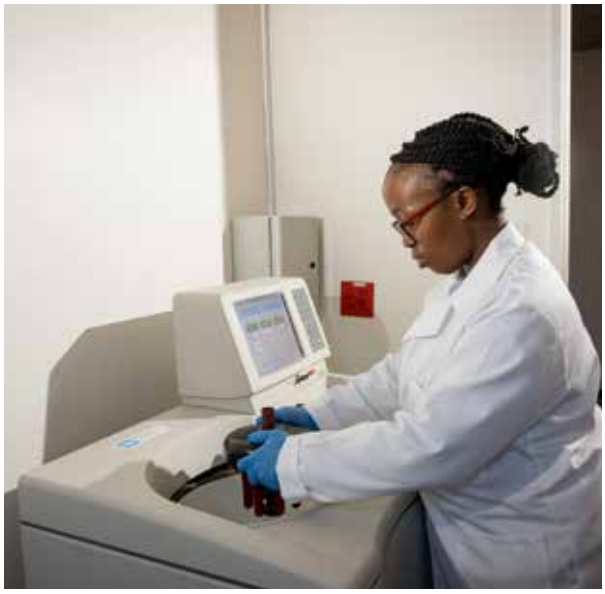
The focus of the SAMRC/WITS Antiviral Gene Therapy Research Unit (AGTRU) is on countering infections that are important to South Africa and other parts of sub-Saharan Africa. The major activity of the SAMRC/Wits AGTRU during 2023/24 is involvement with the mRNA vaccination hub in South Africa. This initiative has been driven by the WHO with support from several governments (e.g. South Africa, French, German, Swiss, Italian, United South Africa and Canadian) and various philanthropies. The hub's goal is to build capacity in mRNA technology for vaccine development. The initial aim was to develop mRNA vaccines against SARS-CoV-2, but the goals have been broadened to address existing serious infections such as are caused by Mycobacterium tuberculosis (Mtb) and HIV (mRNA hub and BRILLIANT consortium). These activities are important to ensure global preparedness for future pandemics.

Another area of interest is countering infection with Hepatitis B Virus (HBV). Chronic infection with the virus is hyperendemic to sub-Saharan Africa and continues to be a significant but underappreciated cause of public health problems. Licensed anti-HBV drugs have poor efficacy, and rarely prevent mortality that result from complications of the infection. Research completed to date in our unit shows that gene therapy has the potential to eliminate the virus from infected cells. Three approaches have been employed: gene silencing, epigenetic silencing and gene editing.

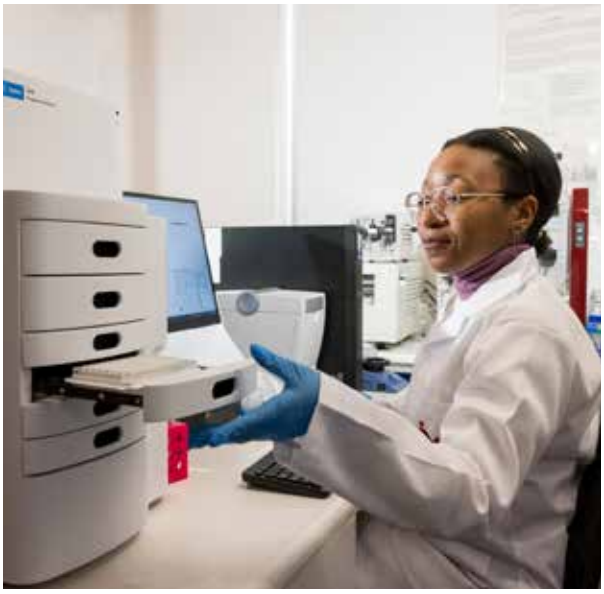
Additionally, new-generation vaccination technology is also being used to improve prophylaxis against HBV. We are using mRNA technology and engineered recombinant adenoviral vectors to deliver immunogenic HBV antigens. Current HBV-preventing regimens entail the use of three doses of a subunit-type vaccine. Unfortunately, in resource-poor settings, children are often lost to follow-up before receiving the complete course. The availability of vaccines that are effective after only one dose, such as the mRNA and adenoviral-based candidates under development, will contribute significantly to providing better coverage.

Equitable capacity development for empowering communities

Building human capacity has always been a priority of our research team. Since the establishment of the Wits/SAMRC AGTRU in 2015, we hosted eight postdoctoral fellows, and supervised eight PhD and eleven MSc candidates to completion of their degrees. These graduates are representative of the country's demographics and many of them have gone on to successful careers as scientists. Some graduates are themselves training the next generation of researchers in the Wits/SAMRC AGTRU. Examples are Assoc. Prof Abdullah Ely,



Nozipho Mlotshwa using a ultracentrifuge to purify viral particles on vaccine development.



Nyasha Gorogodo carrying out mRNA analysis using a fragment analyser.

Assoc. Prof Betty Maepa, Dr Kristie Bloom and Dr Kubendran Naidoo. Currently, the unit is involved in the training of four postdoctoral fellows, four PhD candidates and seven MSc students.

A focus is on addressing problems that concern South Africans and residents of sub-Saharan Africa. Our team regularly gives input to various media outlets (see below) to engage with communities. In certain cases, such as with the BRILLIANT HIV mRNA vaccine development project, specialists in community engagement are involved. Our team recognises community engagement as being vital to enhancing the acceptance of new vaccines and therapies.

Science for creating a healthier society

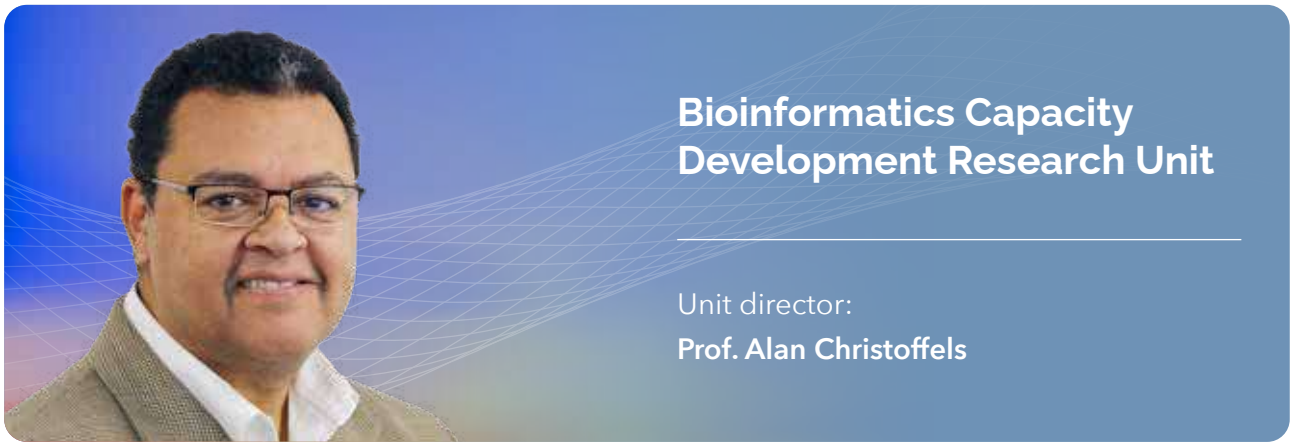
Numerous interviews have been given for local and international news agencies during the past few years. These pertained mainly to advancing the mRNA vaccination hub located in South Africa. The news agencies included the following: eNCA, Voice of the Cape, 91.3 FM, BBC, Blumberg, Medicines patent pool, TV5 (French), The World (a national radio programme in the United States from PRX and GBH), Nature and Liberation (a French newspaper).

In addition, presentations have been made at various conferences attended by the lay public. Also, learners from various schools have been hosted in the unit to carry out 'job shadowing' exercises.

As indicated above, with the BRILLIANT project specialists in community engagement have been brought into the consortium to facilitate broad acceptance of modern mRNA vaccine technologies.

In celebration of 30 years of democracy in South Africa

It is vitally important that South African scientists participate fully in tackling health problems that face the country, and experiences from the COVID-19 pandemic reinforce this notion. To enable outbreak preparedness, a good foundation must exist in South Africa and other Low and Middle-Income Countries (LMICs) so that a rapid response can be implemented in the event of a serious pandemic emergence. Our unit has been generously supported by the SAMRC and other government funding agencies for many years during the time of democracy. This has enabled us to build useful infrastructure and has been employed to build mRNA-, protein subunit- and adenovirus-based vaccine capacity.



Bioinformatics Capacity Development Research Unit

Unit director:
Prof. Alan Christoffels

Prioritising responsive research through impactful interventions

At the Bioinformatics Capacity Developments Research Unit, our long-term goals are to contribute to improved health in Africa, increased African Biotechnology Capacity, and mature ethical and governance frameworks for African health data. Our medium-term contributions include: (1) wider deployment of bioinformatics solutions to public health problems, including precision medicine, biosafety, health informatics and pandemic preparedness; (2) Promotion of industry-research collaboration and entrepreneurship supporting growth of the digital economy; (3) Wider engagement with One Health principles, with ongoing contributions to a larger drug resistance and drug discovery knowledgebase; and (4) Wide uptake and use of appropriate ethics and data governance frameworks and tools.

At the Bioinformatics Capacity Developments Research Unit, we are contributing to the realisation of these goals through projects such as the development of a virtual genotyped cohort to study drivers of multi-morbidity in WCGHW healthcare clients; development of data standards, pipelines and tools for pathogens to support pandemic preparedness, AMR and OneHealth solutions and to study virus evolution; development of data governance and ethical tools and guidelines; development of databases for drug discovery targets. During the reporting period, these programmes have made many significant contributions as indicated through the publications, presentations and activities – including training and education activities – outlined in this report.

Short-term impacts arising from these outputs include increasing open access to bioinformatics tools and methods, improved use of pathogen genotype data for surveillance and public health planning, and ongoing validation of new drug target candidates. Frameworks and tools to aid benefit sharing and support different modes of data sharing have also been published.

Equitable capacity development for empowering communities

Genomics Regional Training: As a continental pathogen genomics training hub, we have responded to the current cholera disease outbreak through a partnership with the Africa CDC to train public health staff from 15 African countries on data analysis of cholera disease outbreak genomic datasets. The workshops cover between 1-2 weeks and provide participants with both theoretical and hands-on experience. This programme has provided a core skill to public health staff to analyse their locally generated data to inform a public health response.

Benefit Sharing Framework was developed by the PHA4GE Ethics and Data Sharing working group (Chair N Tiffin) to promote more equitable practices for capacity development and benefit sharing in health research, particularly in LMICs. This framework provides a tool to operationalise benefit sharing and aims to make it easier for researchers without experience in benefit sharing to be able to design a benefit sharing plan for their research programmes.

Equitable sharing of data and biospecimens in Africa: This work is funded by B&MGF (Nicki Tiffin, Calestous Juma Fellowship). The platform aims to

empower African researchers and data/biospecimen generators to have oversight of modes and conditions for the onward sharing of the resources they have generated. This platform will promote more equitable benefit sharing and support better sustainability models for resource generators in Africa and will help to ensure ethical re-use of these resources by giving oversight of onward use to those who generated them. As part of this project, we have also published a guide to different types of data sharing to promote more equitable modes of sharing data where possible. Data-sharing modes such as collaborative sharing and federated analysis can promote capacity development for researchers who are willing to share their data using these modes rather than direct sharing.

Science for creating a healthier society

In our work building a virtual genotyped cohort, funded by SAMRC/UKRI we have been inviting health care clients of the Western Cape Government Department of Health and Wellness (WCGHW) to participate in the study. We have a tiered informed consent protocol which is implemented by our recruitment officer who is a trained genetic counsellor. The protocol involves extensive discussion of eight different elements for which we request individual consent. We have designed the process to provide the information to participants in sections with a request for consent to that specific data use after each question, to avoid information overload and confusion for participants.

We have found this approach to be effective: whilst some participants don't wish to get into the details, this modularised approach allows for more focused questions from participants, and they can select the use cases they are comfortable with. So far, we have found only one type of data use that is not considered acceptable by all participants, and this is the use of genetic data for ancestry studies, which some participants do not agree to. We believe that the use of this tiered consent structure makes it more possible to accurately understand the preferences of each participant.

In celebration of 30 years of democracy in South Africa

As we reflect on 30 years of democracy in South Africa, the SAMRC-SANBI Bioinformatics Unit affirms its commitment to; addressing issues of inequality – there remain economic and social inequalities in our country. As a SAMRC Unit, we will strive to create opportunities to ensure equitable access to bioinformatics education and training and promoting social inclusion and diversity.

We will continue to empower communities through our research and development.

Cardiometabolic Health Research Unit

Unit director:
Prof. Tandi Matsha

Prioritising responsive research through impactful interventions

The prevalence of non-communicable diseases (NCDs) such as diabetes, hypertension, chronic kidney disease, and cardiovascular diseases is rapidly increasing in Africa. The Cardiometabolic Health Research Unit aims to investigate the underlying risk factors and pathophysiological changes contributing to these diseases, potentially identifying early biomarkers for at-risk patients. By understanding the complex interaction of genetic, behavioural, and environmental factors leading to metabolic disease, chronic inflammation, and endothelial dysfunction, the unit seeks to develop strategies to prevent cardiovascular disease onset.

Significant progress has already been made by the unit, including the identification of novel miRNAs associated with diabetes, chronic kidney disease, and hypertension. Studies have also revealed links between an abnormal oral microbiome, periodontal disease, and Type II diabetes onset, as well as the potential diagnostic utility of alternative tests like fructosamine and glycated albumin for diabetes. Additionally, research has demonstrated the efficacy of resveratrol in reversing cellular damage caused by a high-glucose environment. Moving forward, the unit plans to investigate cardiometabolic diseases using an integrated approach, focusing on epigenetic mechanisms, the oral microbiota, immune function, endothelial dysfunction, and lifestyle factors. These efforts align with national goals outlined in the National Development Plan (NDP), particularly in improving education, training, and innovation, as well as promoting health and reducing the prevalence of NCDs. The unit contributes to the NDP by training researchers, including underrepresented

Prof Davidson was part of the African Society for Laboratory Medicine writing workshop in December 2023.

Staff and students at the first SAMRC/CPUT Cardiometabolic Health Research Unit symposium in November 2023.

groups like black women scientists, and by addressing the shortcomings in current diagnostic methods for NCDs. By developing context-specific methodologies and identifying diagnostic and prognostic markers, the unit aims to improve the management of cardiometabolic diseases and reduce associated complications.

Equitable capacity development for empowering communities

The Cardiometabolic Health Research unit prioritises equity and dignity in health research and healthcare through various capacity development initiatives. These initiatives focus on empowering staff and the community, particularly individuals from previously disadvantaged backgrounds and underrepresented groups. Training and mentorship programmes are offered to staff, as well as recent matriculants and community members involved in our community studies, covering research skills and career development. Special support is extended to female scientists of colour, ensuring their inclusion and advancement within the scientific community. Community engagement is central to the unit's work, with studies conducted in Bellville South and Belhar directly involving residents. Community members are hired as research assistants, provided with training, and offered employment opportunities, fostering empowerment within the community and ensuring research relevance.

The unit's research is driven by a commitment to health equity, aiming to address disparities and improve outcomes for all, regardless of background or socio-economic status. In summary, the unit's capacity development initiatives promote equity and dignity by providing training, mentorship, and employment opportunities to staff and community members, particularly those from underrepresented groups. Through community engagement and a focus on health equity, the unit strives to empower individuals and communities, fostering participation in and benefit from the research process while addressing health disparities.

Science for creating a healthier society

The research unit actively engaged with the community to disseminate research findings and raise awareness about the importance of cardiometabolic health. One significant outreach effort involved a researcher presenting a talk at an Oral Health Day event hosted in a community centre in Strand, Cape Town. The presentation highlighted the crucial role of the oral microbiome in overall health, particularly its impact on cardiometabolic health. The community members responded positively to the science engagement, showing keen interest in understanding the link between oral health care and overall well-being. To extend the reach of this research beyond the local community, an article discussing the findings was published in The Conversation Africa. This article gained traction and was subsequently picked up by radio and news stations, leading to further dissemination of the research findings.

Dr Stanton Hector being interviewed by eNCA reporter Kevin Brandt in December 2023.

Prof Essop and Dr Motshwani at the first SAMRC/CPUT Cardiometabolic Health Research Unit symposium.

Attending the IFCC WorldLab 2023 congress in Rome, Italy from left to right: Dr Cecil Weale, Ms Abegail Tshivhase, Prof Rajiv Erasmus, Dr Don Matshazi and Dr Saarah Davids.

Team from SAMRC/CPUT Cardiometabolic Health Research Unit at the Egylabs AFCC in Cairo Egypt in February 2024. Dr Cecil Weale, Dr Dipuo Motshwari, Dr Shanel Raghubeer and Dr Don Matshazi.

The researchers involved in the study participated in interviews on various radio shows, providing insights into the implications of oral health for cardiometabolic health. Moreover, the research received broader attention when the unit co-director, Prof Glenda Davison, was invited for a TV interview on eNCA. The TV interview allowed for a wider audience to be reached, contributing to increased public awareness and understanding of the research findings. Overall, these outreach efforts effectively communicated scientific research to the public, translating complex findings into accessible information that resonated with diverse audiences. The positive feedback received from community engagements, media interviews, and article dissemination indicates a growing interest in oral health in promoting overall well-being and preventing cardiometabolic diseases.

In celebration of 30 years of democracy in South Africa

As South Africa celebrates 30 years of democracy, the research unit reaffirms its commitment to promoting health equity, dignity, and empowerment for all citizens. Recognising the historical injustices and disparities that have persisted in healthcare, particularly among marginalised communities, the unit is dedicated to addressing these inequalities through its research and outreach efforts. The unit's message emphasises the importance of inclusive and community-centred approaches to healthcare, where the voices and needs of all individuals, regardless of background or socio-economic status, are heard and prioritised. By engaging with communities, particularly those who have been historically disadvantaged, the unit strives to empower individuals to take control of their health and well-being. Moreover, the unit is committed to advancing scientific knowledge and innovation in the field of cardiometabolic health by understanding the complex interactions between genetics, lifestyle choices, and the environment, and by training future scientists. Through its research, the unit seeks to identify novel biomarkers, interventions, and strategies that can improve early detection, prevention, and treatment of cardiometabolic diseases.

As South Africa enters its fourth decade of democracy, the research unit remains steadfast in its mission to contribute to a healthier, more equitable society. By bridging the gap between research and community engagement, the unit aims to create positive change and lasting impact in the lives of all South Africans, ensuring that the principles of democracy extend to every aspect of healthcare.

Genomics of Brain Disorders Research Unit

Unit director:
Prof. Soraya Seedat

Prioritising responsive research through impactful interventions

The overarching aim of our research in the Genomics of Brain Disorders (GBD) Extramural Research Unit is to provide new insights into genomic and environmental factors that influence risk or progression of brain disorders across the lifespan, gather fundamental knowledge about disease processes in South African and African samples to develop new and effective treatments that are culturally appropriate and acceptable, and to develop and/or validate processes to utilise genomic data in clinical care.

Over the reporting period, one of our aims has been to improve our unit's computational capacity, which has been realised with the recent establishment of the Virtual Reality and Psychophysiology Laboratories, alongside the Psychiatry Molecular Laboratory, facilitating the cross-pollination of projects and ideas. These projects provide a unique opportunity to further investigate causal relationships between targeted neural circuits and objective neurophysiological responses and have allowed us to broaden our scope of research and build training capacity in multi-modal neurotechnologies. We have also introduced a new research thrust integrating neuroethics and neuroscience research in South Africa. Here, the long-term goal is to develop, test, and disseminate strategies to promote ethics in African neuroscience. We have established a Neuroethics Workgroup, comprising experts in neuroscience, psychiatry, bioethics, community engagement and law, with a focus to identify challenges and priorities which are important for empirically informed policy and practice options in African neuroscience research.

Equitable capacity development for empowering communities

The GBD Unit's projects over the reporting period have afforded opportunities for up-skilling of students and staff in clinical/psychometric assessments, genomics and 'omics' technology, brain imaging, qualitative and mixed-methods research, and cultural neuroscience approaches. The Master's in Science (Neuroscience) programme introduced in 2023, has facilitated the upskilling of research students in these areas. Profs Seedat and Hemmings also co-founded and currently co-lead the African Neuroscience Alliance, and in 2023, we initiated monthly African Neuroscience Alliance (ANA) meetings, held at the beginning of each month, in order to equip young African neuroscientists with the knowledge and tools to further their careers. GBD has over the years, also supported research within the unit, with a focus on research initiated by early-career researchers. Recently, we provided seed funding to 2 early-career collaborative teams (comprising African neuroscientists) to embark on neuroscience research together. We have also successfully conducted a number of other capacity-building events, ranging from short, intensive workshops on Cognitive Behavioural Therapy for Insomnia (CBT-I), and "Paper-in-a-Day" workshops to regular weekly workshops on brain imaging data analysis.

Science for creating a healthier society

Members of the Psychiatric Molecular Laboratory facilitated the research group's involvement in the SAMRC GenS Job-shadow programme, where high school learners were given the opportunity

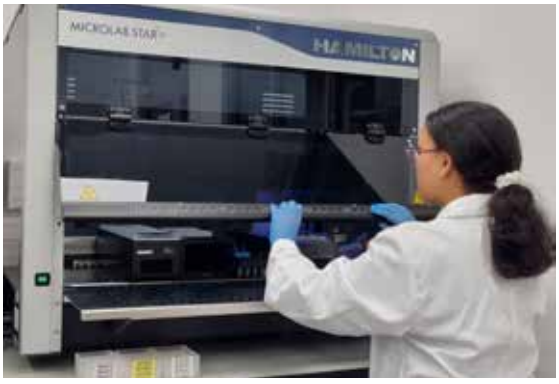
to experience the laboratory environment and to perform molecular experiments. In addition, several GBD-affiliated postgraduate students participated as judges in the Eskom Expo for Young Scientists Cape Town Regional Expo. Prof Hemmings was invited to present to a cohort of IEB teachers on the Gut Microbiome and Mental Health. The audience comprised approximately 30-40 IEB Life Sciences teachers. Prof Hemmings was also invited as a key speaker at the launch of Enbiosis, a new product that integrates gut health into everyday health. The audience here comprised many healthcare practitioners, including dieticians, psychologists, GPs, as well as individuals in the Medical Aid industry. This has resulted in a potential collaboration between Rx Group of Companies and Profs Hemmings and Seedat. Through the Wellcome Trust, Galenos project (https://www.galenos.org.uk/) – a paradigm (and practice) shift toward the generation of translational mental health evidence to drive innovation in diagnosis and treatment – we are involved in an extensive global network of stakeholders to co-produce research, including with people with lived experience.

In celebration of 30 years of democracy in South Africa

Over the past 30 years of democracy in South Africa, mental health research has seen notable advancements with increased recognition of the importance of addressing mental health issues. Societal attitudes towards mental health have also shifted, resulting in increased awareness and reduced stigma surrounding mental illness. Research initiatives in mental health have also improved, with increased investment by government and academic institutions in mental health research over the years, including investment in research integrating mental health and other non-communicable disease. This investment has led to a deeper understanding of the prevalence, risk factors, and impacts of mental health disorders within South African communities.

It has been encouraging to witness the growing emphasis on community-based mental health interventions tailored to the unique socio-cultural context of South Africa and the inclusion of people with lived experience in all stages of the research life cycle. These programmes aim to improve access to mental health services, particularly in underserved and marginalised populations. Whilst there is still much work to be done, we believe that, through collaborative efforts and dedication to research, we have made significant contributions to disentangling the complexities of neuropsychiatric disorders, particularly in African individuals. However, we need to be cognisant of the current challenges, including disparities in access to mental health services, shortage of mental health professionals, and ongoing stigma surrounding mental illness. Continued research is needed to address these gaps and ensure equitable mental health support for all South Africans.

Laboratory manager, Ms Kayleigh Filton, preparing the Hamilton Starlet liquid handler for use.



An Msc Neuroscience student Ms van Royen viewing an agarose gel and preparing samples in the biosafety cabinet.

Platform for Pharmacogenomics Research and Translation Research Unit

Unit director:
Prof. Collet Dandara

Prioritising responsive research through impactful interventions

Revolutionising Precision Medicine in South Africa and aiding Transformation by empowering the next generation of scientists, particularly those of marginalised backgrounds. Furthermore, building collaborations with other researchers to disseminate knowledge of African-specific pharmacogenomics research.

Equitable capacity development for empowering communities

The EMU held several seminars collaborating with the African Pharmacogenomics Network. The group also held internal group seminars. Several students affiliated to the group graduated. We graduated 1 PhD, 3 MSc, and 2 Honours students. In 2023, we also welcomed Dr Khuthala Mnika, as a senior scientist in the group, bringing along her research funding from NRF.

Science for creating a healthier society

By spearheading the initiative of Learner's Open Day, it has promoted science education for high school learners across the Western Cape by allowing learners to have access to researchers and experience basic experiments within a tertiary setting. This has resulted in positive feedback from the learners.

In celebration of 30 years of democracy in South Africa

Striving to make therapeutic drug treatments safer. We are set on a path that will allow the administering of the right drug, to the right patient, at the right dose, at the right time.

Honours students working at the lab.

Master students Mouton and Gcobo prepare to perform Whole Exome Sequencing.

Bianca Kruger uses the Olympus CKX41 Microscope while Prof Dandara supervises.

Preparing DNA extraction.

Precision and Genomic Medicine Research Unit

Unit director:
Prof. Raj Ramesar

Prioritising responsive research through impactful interventions

The objectives of the Precision and Genomic Medicine Research Unit were: (1) to expand our work into the indigenous population of the Eastern Cape, notably with regards to large scale psychiatric genomics research of schizophrenia in that community. This is a neglected community and stands to remain distal to the advancements coming out of the major progresses being achieved in first world populations that are being researched using this powerful technology. We have established a research infrastructure with colleagues in the Eastern Cape and have recruited approximately 4000 cases and controls and we are busy doing Whole Exome Sequencing and Whole Genome sequencing on these. (2) to improve the diagnostics of inherited retinal diseases (IRDs), for which we are a national centre of excellence, by making a concerted effort to work in our indigenous communities. (3) having worked on the genetics of hereditary colorectal cancers extensively amongst the rural communities of the Northern and Western Cape Provinces, and shown the power of precision/personalised medicine to (a) identify the genetic basis of disease in affected patients, and (b) to afford predictive genetic testing in their first degree relatives, and presymptomatic clinical surveillance, which has resulted in improved both morbidity and mortality, and (c) be a major cost saver (in a formal cost-benefit health economics study.

Our ongoing work for 2023/2024 has focused on: (i) developing a regression scoring tool, (and turning this into an app available on our mobile phones), to be used by the managing multidisciplinary team to ascertain the familial colorectal cancer patients from the total colorectal cancer patient burden, and (ii) developing a technology based on cell free (circulating) RNA/DNA to potentially replace colonoscopies to identify neoplasm-linked biomarkers.

Equitable capacity development for empowering communities

Our capacity development initiatives in the unit are driven by a commitment to training and promoting equity in health research. The Human Genetics Division is focused on creating sustainable capacity development programmes that align with our research translational goals. Our BSc Hons programme, which consists of four mandatory modules, including two on bioinformatics and data analytics, alongside two electives and a laboratory-based research project is key. This programme serves as an entry point for students into our research projects and provides a pathway for our illustrious MSc and PhD studies. While we are inundated with applicants from historically advantaged institutions, we have been successful in attracting postgraduate students from underrepresented institutions and keeping our student profile as diverse as the peoples of this country.

Another of our significant achievements is the internationally recognised MSc programme in Genetic Counselling. This programme emerged from our research into hereditary diseases, specifically Inherited Retinal Diseases and Familial Colorectal Cancer. These studies identified extensive familial lineages with high rates of these disorders, emphasising the need for genetic counselling to help affected families understand diagnostic and

prognostic information, as well as therapeutic and clinical management options.

More recently, in 2023/2024, we have developed and launched an accredited Postgraduate Diploma (PGDip-CHP), an MSc (CHP) degree and a PhD (CHP) programme, considering the desperate national and continental need for Human Bioinformatics, focusing on the growing field of precision and genomic medicine. These programmes are designed to meet current research demands and future needs in precision medicine. Through these training initiatives, we aim to foster a diverse and inclusive scientific community. By providing comprehensive educational pathways from undergraduate to postgraduate levels, we empower a broader range of students and researchers, thus reinforcing our commitment to equity and dignity in health research.

Science for creating a healthier society

During the reporting period, we successfully extended our research beyond the laboratory to engage with the communities most affected by our work. This direct interaction has led to significant outcomes in various projects. Psychiatric Genetics: Our psychiatric genetics research has a robust connection with a community advisory board, which has deeply influenced our approach. This collaboration has helped us ensure that our research addresses the real-world needs of those affected by psychiatric disorders, leading to more relevant and impactful studies.

Inherited Retinal Diseases (IRD): In partnership with Retina South Africa, a support group for those with retinal disorders, we provide genetic diagnosis reports to individuals and families. This grassroots engagement has resulted in one of Africa's first clinical trials for inherited retinal diseases, specifically focusing on early-onset Stargardt Disease. This trial would not have been possible without our strong ties to the community.

Familial Cancer Project: Our work on familial cancer has had the most profound community impact, particularly in rural regions of the Western and Northern Cape provinces. This project has significantly reduced morbidity and mortality rates among these communities. The Western Cape Department of Health has praised our efforts, with endorsements from CEO Dr Keith Cloete and COO Dr Saadiq Kariem. Our project has been earmarked for formal inclusion in the province's healthcare programmes.

Nationally, our work with the Director of the South African National Cancer Registry has led to the development of the South African National Cancer Prevention Services (SANCAPs), a national colorectal cancer prevention programme.

In celebration of 30 years of democracy in South Africa

As South Africa celebrates 30 years of democracy, our Division of Human Genetics underscores its commitment to equity, capacity development, and community engagement in health research. Our message is clear: science must serve the entire community, driving positive change and promoting health equity. Our approach centres on empowering a diverse new generation of scientists and researchers. Through robust training programmes and capacity-building initiatives, we aim to create a more inclusive scientific landscape. This commitment is embodied in our BSc Hons and MSc programmes, designed to attract talent from underrepresented institutions and nurture their growth.

Beyond the lab, our focus is on engaging with communities. Our psychiatric genetics project is guided by a community advisory board, ensuring our research is aligned with the needs of those affected. Our work in inherited retinal diseases, in partnership with Retina South Africa, provides genetic diagnosis to patients and their families. This partnership has also led to one of Africa's first clinical trials for these conditions, demonstrating the impact of community-driven research. Our familial cancer project in the Western and Northern Cape provinces is a testament to our commitment to reducing health disparities. This project has significantly lowered morbidity and mortality rates, earning praise from the Western Cape Department of Health. It has also inspired a broader collaboration with the South African National Cancer Registry to develop a national cancer prevention programme, paving the way for equitable health outcomes across the nation.

As we celebrate this democratic milestone, our unit reaffirms its commitment to our communities.

Precision Oncology Research Unit

Unit director:
Prof. Zodwa Dlamini

Prioritising responsive research through impactful interventions

The Precision Oncology Research Unit (PORU) pursues to map the landscape of HIV-associated cancers to decrypt the underlying causes of these cancers and to discover targets for the development of novel and more effective targeted therapeutics, as South Africa carries the burden of high HIV infection rates and HIV associated cancers. Important research projects include:

(1) Mutational burden and splicing genomics analysis in endocrine positive breast cancer patients who progress after neoadjuvant aromatase inhibitor; (2) Splicing genomic events analysis and targeting for HIV and HPV-associated cervical cancers; (3) Molecular analysis and aberrant splicing events in HPV16 (E6/E7)-associated head and neck oropharyngeal squamous cell carcinomas (HNSCCs) in South Africa; (4) Analysis of long non-coding RNAs (LncRNAs) and alternative splicing modulations in HIV-associated colorectal cancer of black patients; (5) Genome analysis of patients with HIV and HPV-associated oesophageal squamous cell carcinoma (OSCC); (6) Molecular profiling of colorectal cancer in South African patients and its correlation with HIV infection; (7) Genome analysis of melanoma in South African patients; (8) Molecular profiling of endometrial cancers occurring in Black South African women; (9) Assessing prognostic factors for survival outcomes and late presentation among cancer patients in a hospital setting in South Africa; (10) Linking prostate cancer progression to perineural invasion and neoneurogenesis; (11) Biomarkers of radiotherapy resistance in cervical cancer, and, (12) Genome analysis of potential biomarkers for head and neck squamous cell carcinomas (HNSCCs) in a South African Cohort.

The unit and the affiliated Institute have collaboratively been awarded the SAMBAI cancer grand challenges in addressing cancer inequalities, especially in African populations. SAMBAI will generate a comprehensive database with measurements of social, environmental, genetic, and immunological factors that cause and influence disparate cancer outcomes in underserved populations of African descent, and these will include HIV-associated cancers in the African population.

Equitable capacity development for empowering communities

The unit comprises of Basic Scientists and Clinicians and postgraduate students, most of which come from previously disadvantaged backgrounds, with a common goal of addressing cancer disparities. The Unit Director is a black South African woman. The unit already has 1 NRF-Y rated black South African female translational oncology scientist, the first MSc in Medical Oncology graduate of the unit in September 2023 was a black female student, the unit is training, mentoring and supervising a cohort of postgraduate students from HDIs, whom mostly have been awarded postgraduate research scholarships. There is a shortage, especially in African populations of cancer scientists, and the unit seeks to positively contribute towards closing this gap through capacity development. The unit has also been an indispensable platform towards the acquisition of supplementary funding in comprehensively addressing cancer disparities.

Science for creating a healthier society

University of Pretoria Cancer Research Elective (UPCRE), a mentorship course tailored for third-year medical students at the University of Pretoria, is dedicated to providing a comprehensive exploration of cancer research, offered through PORU and other institutes and departments at the University of Pretoria. This programme offers mentorship and exposure opportunities, further enriching the educational experience for aspiring clinician scientists. PORU plays a pivotal role in UPCRE by placing a strong emphasis on molecular genetics and immunogenomics, specifically their applications in precision oncology and targeted therapies. Through PORU's involvement, medical students engaged in the mentorship course at the University of Pretoria gain valuable insights and hands-on experience in these specialised fields, equipping them with the knowledge and skills necessary for navigating the forefront of cancer research and contributing to advancements in precision medicine.

In celebration of 30 years of democracy in South Africa

The unit is committed to addressing cancer health disparities, particularly in a South African context. African populations are underrepresented in cancer clinical trials, cancer genomics medicine and global genomics health. The unit aims at understanding the underlying intrinsic and extrinsic mechanisms employed by genetics and socio-economic determinants that affect cancer risk and outcomes in underserved populations, with an overall aim to reduce these disparities through evidence-based interventions.

Stem Cell Research and Therapy Research Unit

Unit director:
Prof. Michael Pepper

Prioritising responsive research through impactful interventions

The Stem Cell Research and Therapy Research Unit undertakes translational molecular cell biology-oriented research exclusively on patient material, intending to address South Africa's disease burden in terms of diagnosis, treatment, policy, and entrepreneurship.

The main goals have been (1) to improve the applicability of cell and gene-based therapeutic modalities for the treatment of communicable and non-communicable diseases in South Africa; (2) to understand the molecular pathogenesis of the changes seen in newborn infants exposed to ischemia/hypoxia; (3) to dissect the molecular mechanisms of obesity to identify potentially new molecular targets for combatting this disease; and (4) to understand the mechanisms behind the disturbances in hematopoiesis seen in patients living with HIV.

Equitable capacity development for empowering communities

Staff at the Stem Cell Research and Therapy Research Unit constitute an ever-increasing representation of South African demographics, with the most members being women. Training opportunities are provided in most areas relevant to the group, both locally and abroad. Student bursaries are provided as needed, and we have been fortunate to be able to provide financial support to all students who require this, depending on need.

A clear emphasis is placed on translational research, with a view to protecting intellectual property where possible. Several startup companies have also been initiated. The goal is to ensure that students who leave the unit after graduation are market-ready. To date, all students who have left the group have been able to find employment, usually at a level that adequately reflects their level of personal investment.

Science for creating a healthier society

Members of the unit are fully conscious of the importance of engaging appropriately with the public/community as this (a) sensitises potential beneficiaries to the health care opportunities that are or will become available; (b) improves perception of the work we do (sometimes viewed with uncertainty due to its complex and cutting-edge nature); (c) increases enthusiasm for the work we do which could lead to potential funding and other opportunities.

To achieve these goals, there were interactions with the media and have several social media platforms that are frequently visited by the public/community. Traditional academic avenues such as peer-reviewed scientific publications, post-graduate student graduations as well as conference presentations and abstracts are also well represented.

In celebration of 30 years of democracy in South Africa

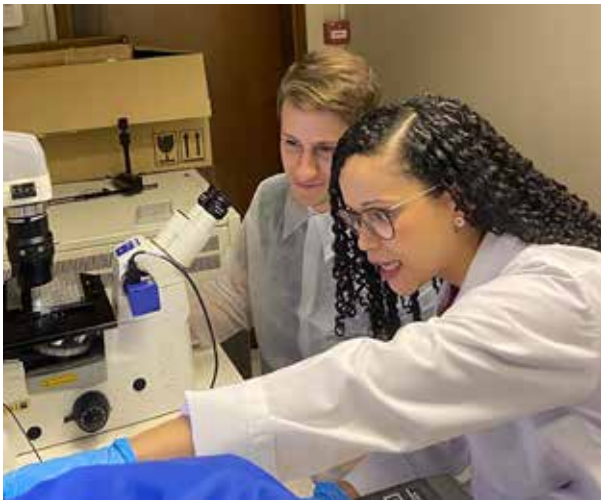
South Africa is perfectly positioned to address many of the world's major health challenges, due in part to (a) a robust, innovative, and highly dedicated research community; (b) a high disease burden; and (c) the greatest genetic diversity on the planet.

Biomedical research in South Africa is flourishing, and as we move away from a reactionary overprotected environment based on past injustices, the future promises to be very bright with contributions to local, African, and global health and well-being continuing to increase as the potential is fully unlocked.

Postgraduate students Ms. Priyal Mistry and Ms. Laurah Guvi discussing results obtained using the FacsAria Fusion cell sorter.

ICMM members Dr L Mellet and Prof R Ambele participating in a panel discussion during the 2024 Faculty Research Day, in the Faculty of Health Sciences, at the University of Pretoria.

ICMM members receiving the prize for best exhibition stand during the 2024 Faculty Research Day at the University of Pretoria.



Dr Hendricks and Dr Ellero visualising haematopoietic stem and progenitor cells (HSPCs).

Wound Healing and Keloid Scarring Research Unit

Unit director:
Prof. Nonhlanhla P Khumalo

Prioritising responsive research through impactful interventions

The strategic purpose of the Wound and Keloid Scarring Translational Research Unit lies in addressing the pressing research and development needs within South Africa, particularly in the realm of skin repair, healing, and regeneration.

Our proposed translational research programme aims to establish a centre of excellence dedicated to advancing knowledge and innovations in these critical areas. At the core of our programme is a focus on elucidating the fundamental mechanisms underlying skin healing and scarring, with specific attention given to hypertrophic and keloid scar formation. By delving into these processes, we seek to uncover new therapeutic targets and biomarkers that can revolutionise the detection, prevention, and treatment of abnormal wound healing, particularly in pigmented human skin. Moreover, our objectives extend beyond basic research to encompass education, training, and clinical management in the fields of abnormal wound healing, skin regeneration, and scar management. By nurturing expertise and disseminating knowledge, we aim to empower healthcare professionals and researchers alike to address the complex challenges posed by skin repair and regeneration. Our research unit's strategic purpose is deeply rooted in the urgent need to advance understanding and capabilities in skin repair and regeneration, thereby contributing significantly to the research and development landscape of South Africa.

Over the 2023/24 reporting period, our highlights and breakthroughs include:

(1) Development of the first cell line in keloid disease; (2) Identification and validation of unique gene, protein and metabolite keloid biomarkers; (3) Creation and validation of keloid spheroids for in vitro drug testing; (4) Development, optimisation and validation of human acellular skin substitutes; and (5) Evaluation of wound healing properties of indigenous South African plants with early-phase studies have been initiated.

Equitable capacity development for empowering communities

The impact of our research programme on addressing the challenges faced by South Africa is significant and multifaceted. Our focus on proteo-metabolo-genomic, molecular, and cellular investigations specifically targets abnormal wound healing, notably keloid disease, which disproportionately affects individuals of African ancestry. By delving into the underlying mechanisms of these conditions, we aim to identify potential treatment targets that can be translated from bench to bedside, ultimately benefiting patients.

Since the establishment of the Hair and Skin Research (HSR) Laboratory at the Division of Dermatology in UCT in 2015, our translational research approach has yielded promising results. Through innovative study designs utilising various models of wound healing, including in silico, in vitro, ex vivo, and in vivo models, we have developed unique scar models and advanced our understanding of skin biology, tissue regeneration, and fibrosis. This research not only addresses critical gaps in knowledge but also has practical implications for improving patient care and quality of life.

The unit has secured new equipment such as the Matrix-Assisted Laser Desorption/Ionization (MALDI), xCELLigence Real Time Cell Analyzer, LUMOS FTIR analysis and Agilent Seahorse XF Extracellular Flux Analyse that is not available in most SA universities, thus enhancing our state-of-the-art facilities. Also, several patent submissions have been made for Phenyl-Pyrazolo[3,4-B] Pyridine-4-Carboxylic Acid derivates for use as 5-Alpha Reductase Antagonists in methods of treatment, the creation of a Human Keloid Fibroblast Cell Line as well as a method and compounds for treating keloids, respectively. During the reporting period, 2 honours, 1 master's and 2 doctoral students have graduated, with 15 students obtaining an Advanced Diploma in Cosmetic Formulation Science. In addition, several past students/researchers trained within the unit have furthered their careers, having moved on to or being promoted to other opportunities, assuming positions as post-doctoral fellows and a Senior Research Officer within the unit. The unit has also formed collaborations with the Mechanical Engineering Department at UCT, as well as Ohio State University (USA).

Science for creating a healthier society

Our research has generated significant interest and support from external industry collaborating sponsors, resulting in additional funding and opportunities for commercialisation. With a portfolio of 18 published manuscripts and ongoing collaborations, our research portfolio strengthens the broader efforts of the Division of Dermatology in advancing skin repair and regeneration.

Central to our research endeavours is our commitment to patient-centred care and inclusivity. We prioritise engagement with stakeholders across various sectors, including industry, healthcare, academia, and patient advocacy groups, to ensure that our research remains relevant and impactful. Moreover, we actively mentor and nurture the next generation of researchers, both locally and internationally, fostering a culture of excellence and collaboration.

In summary, our research programmes not only address critical healthcare challenges in South Africa but also fosters innovation, collaboration, and capacity building, positioning us as international leaders in the field of skin repair and regeneration.

In celebration of 30 years of democracy in South Africa

The unit's identity and status are characterised by its commitment to advancing knowledge and capabilities in the field of skin biology, particularly in the areas of healing, regeneration, and scarring. With a specialised focus on skin scarring and keloid disease, our research employs a multifaceted approach utilising various in vitro, ex vivo, and sequential in vivo wound biopsy models in human skin, to unravel the complex pathobiology underlying skin repair processes, with a particular emphasis on identifying and evaluating targeted biomarkers and therapeutic compounds aimed at enhancing scar treatment, especially in pigmented skin.

Additionally, the unit is dedicated to furthering understanding in skin repair, fibrosis, and regeneration, with a translational therapeutic focus on the development of skin substitutes. Furthermore, it encompasses both basic and translational research endeavours, with the overarching goal of contributing to advancements in the diagnosis, prevention, and treatment of skin conditions related to healing, scarring, and regeneration.

The receipt of the Extramural Research Chair in Wound Healing and Keloid Scarring from the SAMRC is a significant milestone for our research endeavours, and we are deeply grateful for this support. Additionally, while we have been able to conduct research in wound healing and keloid scarring leveraging personnel and consumables from other projects, dedicated funding from the SAMRC enables us to significantly enhance our efforts in this area.

Looking ahead, we envision leveraging our expertise and resources to further expand our reach through remote teaching links and placement opportunities, facilitating wider collaboration and knowledge exchange. By capitalising on our strengths in wound healing and keloid scarring management, we aim to not only advance scientific understanding but also contribute to education, training, and income generation opportunities.

FUNDING HEALTH INNOVATION

Grants Innovation and Product Development

Funding research and facilitating innovation are two of the core activities of the SAMRC that enable the organisation to contribute to the transformation of health in South Africa and beyond. These activities are largely managed by the Grants, Innovation and Product Development (GIPD) Unit, which manages over 300 active grants under 12 programmes (depicted in the figure below), with a total spend on research and innovation grants of R218,587,675 during the 2023/24 financial year. These funds contribute directly to the generation of new knowledge by the SAMRC's grantees, with high-impact publications, capacity development and the advancement of innovations being some of the key outputs that speak directly to the SAMRC's strategic objectives and are helping drive health transformation in the country. The unit's robust grant management standard operating procedures ensure that health research funding is effectively and efficiently administered by the SAMRC and, together with successive clean audits, have contributed to attracting substantial funding from a variety of local and international funders. These strategic funding partnerships enable the SAMRC to expand the funding pool for research and innovation substantially and have contributed to the SAMRC continually exceeding its targets for indicators 2.3.1, 3.1.1 and 3.1.2. During 2023/24 they included the Department of Science and Innovation (DSI), the Bill and Melinda Gates Foundation (BMGF), the Technology Innovation Agency (TIA), the ELMA Vaccines and Immunization Foundation and the Gabriel Foundation.

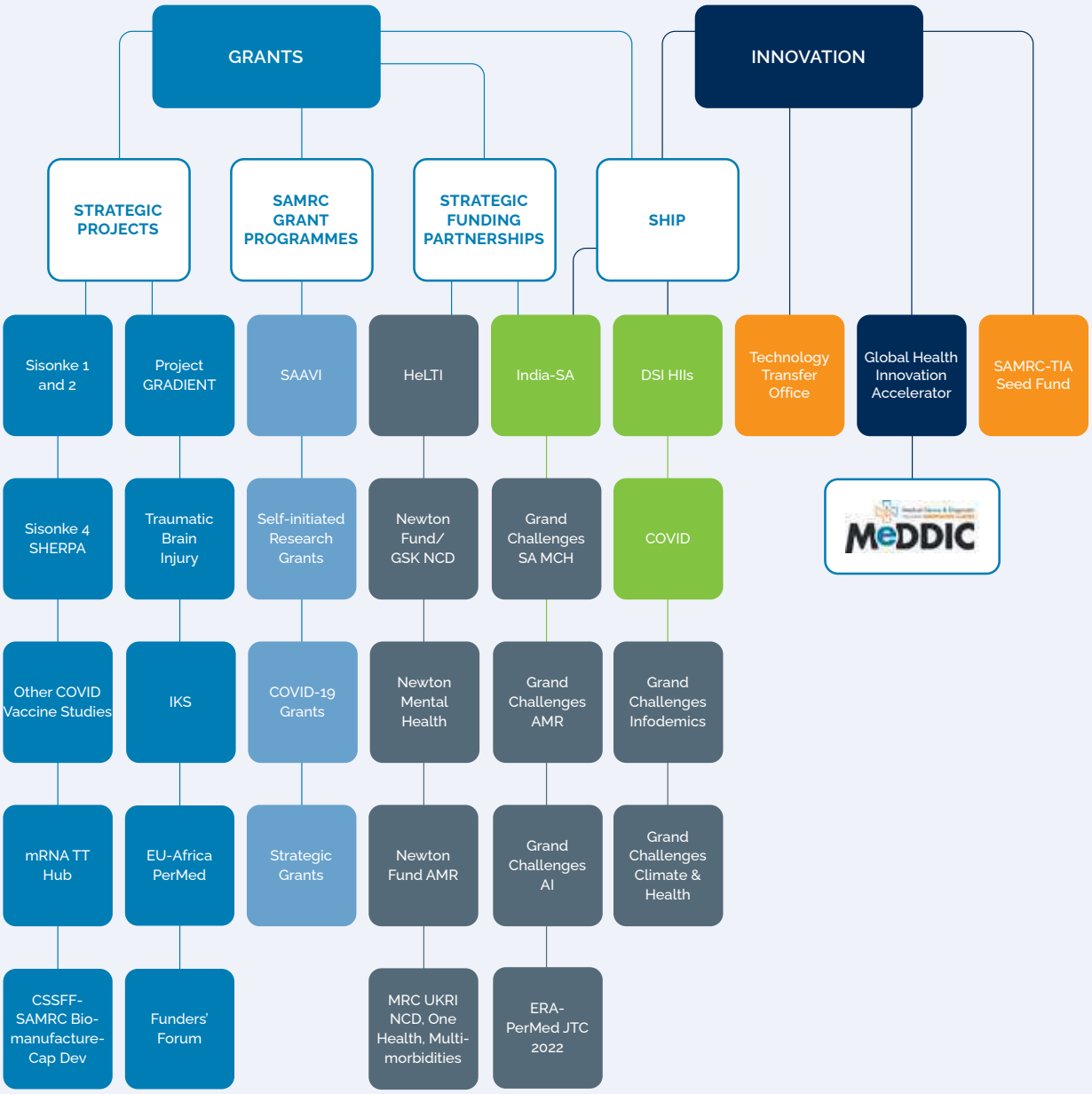
Programme and Strategic Project Updates

Strategic Health Innovation Partnerships (SHIP)

SHIP is a partnership between the SAMRC and the DSI to facilitate and support health innovation to address national priorities and enable the national system of innovation more broadly. SHIP is one of the key programmes through which the SAMRC supports innovation and technology projects aimed at developing, testing and/or implementing new or improved health solutions (Indicators 3.1.1 and 3.1.2). In the 2023/24 financial year, a total of five new innovation and technology projects (indicator 3.1.1) were supported through SHIP, aimed at addressing the following disease areas: HIV, Malaria, TB, Non-communicable Diseases (NCD), and Maternal and Child Health (MCH). There were 21 on-going innovation and technology projects (indicator 3.1.2) supported through SHIP in the past financial year, spanning the following disease areas: COVID-19, HIV, Mental Health, TB, and NCDs.

Some key developments during the reporting period include:

- The completion of enrolment of participants in the CAPRISA 012C trial, a phase II trial of a subcutaneous combination of the monoclonal antibodies CAP256 + VRC07 to assess long-term safety, pharmacokinetics (PK) and preliminary efficacy for preventing HIV infection in women in South Africa and Zambia, with the last participant expected to exit the trial in June 2025. Results are encouraging in that no safety concerns have been observed thus far. During this financial year, SHIP has re-invested in a Council for Scientific and Industrial Research (CSIR) project aimed at local plant-based production of monoclonal antibodies, which is expected to improve the cost of production of monoclonal antibodies and thus improve accessibility of the intervention to South Africans and contribute towards economic development in the country.
- Another major development is the successful establishment of a fully automated Artificial Intelligence/Machine Learning virtual screening cascade at the UCT Holistic Drug Discovery centre (H3D), the first of its kind in Africa. The platform is anticipated to reduce costs and the time it takes to discover new starting chemicals for drug discovery campaigns conducted at H3D. The work was published in a high-impact journal (Nature Communications).
- The SHIFT-TB study, funded by the SAMRC through SHIP and the Office of AIDS and TB, has been concluded, and resulted in the establishment of a highly productive clinical trial site in the Eastern Cape, and has provided important insights into



Overview of the grant and innovation programmes and strategic projects managed by the Grants Innovation and Product Development unit

the impact of the standardised oral 9 – 12-month treatment regimen introduced in South Africa in 2019. The study showed that the regimen only had a 38.4% treatment success rate at the end of treatment, which was much lower than the 64% success rate indicated by data from the national TB register.

- In the area of diagnostics, two new gene signatures for TB have been identified and validated. The first, a 3-gene signature, was shown to be able to distinguish adults with active TB from individuals with lower respiratory tract infections with 100% sensitivity and specificity. The second gene signature, comprised of 5 genes, was reported to be able to discriminate between individuals with active and latent TB infection with a sensitivity of 93.3% and specificity of 100%. These profiles meet WHO Target Product Profiles, and thus hold promise to significantly improve the diagnosis of TB in South Africa and the rest of the world.
- Three consortia with participants from South Africa successfully competed for funding through the international Joint Programming Initiative on Antimicrobial Resistance (JPIAMR), further cementing the role of South African research in the global landscape.

While the key focus of the SHIP programme is supporting product development, transformation and capacity development are important additional goals. As part of a SHIP-funded drug discovery capacity development initiative at the University of Venda (UniVen), a MSc student from UniVen was sponsored to spend time at H3D and received advanced training in ADMET (Absorption, Distribution, Metabolism, And Excretion–Toxicity in pharmacokinetics), a key component of drug discovery, in addition to receiving chemistry mentoring from the H3D team. There were at least 20 female-led projects in the SHIP portfolio in 2023/24 and over 60 postgraduate students supported by SHIP projects.

The DSI renewed its commitment to SHIP by extending the contract with the SAMRC for another three years, with over R265 million allocated for the financial years 2023/24 to 2025/26.

Precision Medicine is a key priority within the SHIP programme that is being advanced through a portfolio of funded projects focused on pharmacogenomics and precision medicine for various cancers and cardiometabolic diseases and is a key example of the application of 5IR to healthcare.

The next year will see the pharmacogenomics portfolio come to an end and a subsequent review process will commence in April 2024 to identify opportunities for further product development support within the portfolio. The past year was also spent developing a 110,000 Human Genome programme for South Africa. This programme is set to address core programmatic gaps to bolster the research and innovation potential for South Africa. The programme focuses on creating a unified ecosystem garnering the participation of all national role players to develop a pilot phase and set up a national centralised data repository.

The GIPD Precision Medicine Programme Manager developed and participated in core engagements at the Science Summit of the United Nations General Assembly (UNGA78) which took place in New York, USA in September 2023. Her presentation highlighted the need for cross-border collaboration, regional development, and investment in scaled genomics programmes in Africa.

This meeting was a hybrid event with various ministries and political leaders from the EU, AU, and UN designed to inform and engage with policymakers to ensure that the role and contribution of science, enabled through digital technologies, is reflected in the European Union and its Member States' policies concerning Africa. The meetings were also designed to increase the level of participation and reinforce the networking by African nations with their partners in related EU programmes. Existing and novel digital capacities for expanding science inclusion and citizen participation by all groups in society across Africa were explored. An output from this engagement was a proposal for the SAMRC to participate in "The European Health Data Space" and contribute to the policy dialogue on the development of the African personalised medicine agenda with both the UN and EU.

The SAMRC, together with the DSI and USA Health Attache, visited the NIH in June 2023 to foster deeper collaboration and build partnerships for the development of programmatic research in NCD's and precision medicine. The visit included National Institute of Allergy and Infectious Diseases, Advanced Research Projects Agency for Health, the National Cancer Institute and the All of US Research Program. The engagement resulted in several US-South African collaborative initiatives, such as the development of the US-SA Cancer Alliance network.

The SAMRC, DSI, NIPMO and ALL of US program officers had a discussion on data sovereignty and navigating data-intensive collaborative research.

The Europe-Africa Personalised Medicine EU-Africa PerMed Consortium

The EU-Africa PerMed is a Coordination Support Action Project, funded by the European Commission Horizon 2020 program, with the aim to foster research and innovation collaboration and knowledge exchange between Africa and Europe in Personalised Medicine (PM). It comprises of 13 partners from Africa and Europe. The consortium focuses on building regional networks within Africa, analysing the personalised medicine landscape, driving the policy dialogue and actively developing a roadmap to enhance the field on the continent.

In the past financial year, the project has conducted several core stakeholder engagement initiatives. These interactions have resulted in a large Continental Gaps and Needs analysis as a key deliverable that was submitted to the European Commission and ongoing regional engagements of the Southern, Northern, Eastern, Western and Central African regions to develop an Action Plan for the development of Personalised Medicine in Africa. The project has given rise to policy briefs and numerous reports enabling an African-centric approach to developing PM on the continent. The Spanish Presidency of the Council of the European Union hosted a High-Level Conference on Personalised Medicine on the 4th and 5th of October 2023 at the Príncipe Felipe Research Center Foundation (CIPF) in Valencia as part of the EU2023 Espanol

The EU-Africa PerMed Consortium: Building links between Africa and Europe in Personalised Medicine. Partners engaged at a high-level conference hosted by the Spanish presidency in Valencia, Spain.

Conference on Personalised Medicine. The SAMRC Programme Manager presented the outcomes from the EU-Africa PerMed project, highlighting the context of the Personalised Medicine Agenda in Africa, and proposed a Regional Consortium model with mutually beneficial cooperation with the EU. This gathering drew over 250 individuals, including several influential stakeholders and policymakers, all converging to deliberate on "Personalized Medicine, the Evolution of Healthcare for Improving People's Lives." The main participants were the European Council, which directs the research and innovation agenda of the European Commission. The outcome led to an engagement with the EU Minister Council in Africa.

In addition to other engagements, the SAMRC Programme Manager for Precision Medicine presented the establishment of research programmes for precision medicine development at the PerMeDINA Precision Medicine Academy held in Tunis, Tunisia in June 2023. This meeting was hosted by the Pasteur Institute and Pasteur Network. Participation in these shared learning experiences have helped other African partners facilitate the development of their Precision Medicine programmes.

International Consortium for Personalised Medicine (ICPerMed)

An important spin-off of the EU-Africa PerMed Project is that the SAMRC has become a member of the International Consortium for Personalised Medicine (ICPerMed), and the SAMRC Programme Manager for Precision Medicine is a member of the Executive Committee of ICPerMed. The consortium includes participation in the largest funding partnership in PM. In the last year, the consortium expanded the funding consortium and launched the European Partnership in Personalized Medicine in January 2024. This is an evolution of the European Research Area Network in personalised medicine (ERA-PerMed). Access to the ICPerMed network has fostered stronger relationships with the EU to support South Africa in developing Personalised Medicine. In November 2023 the EU Minister Councillor for the African Union visited the SAMRC for a high-level discussion on the EU-AU Research and Innovation Agenda to build closer collaborations with the SAMRC.

In the next financial year, the SAMRC, through SHIP and other programmes, will focus on launching a National Genomics Programme and establishing scaled next-generation sequencing technologies and big data capability to better understand the link between genetics and health in African populations and use this to develop more appropriate and relevant health solutions.

Grand Challenges South Africa programme

The SAMRC, through GIPD, runs the Grand Challenges South Africa Programme, which is a co-funding initiative with the BMGF and forms part of the global Grand Challenges partner network. This programme also contributes towards the SAMRC's Strategic Goal 3 and, during the current financial year, four new innovation and technology projects (indicator 3.1.1) were incorporated into the portfolio (and a fifth into the SAAVI portfolio). Four of the projects are aimed at leveraging Artificial Intelligence (AI) to improve access to and delivery of healthcare, and form part of a portfolio of 10 projects to be supported by SHIP (through DSI funds), the SAMRC, and the Bill and Melinda Gates Foundation. The four projects address the following important challenges in healthcare:

- Advancing healthcare equity through language access (improving availability of healthcare information in African languages)
- Strengthening healthcare evidence (improving the speed and accuracy with which new evidence is converted to policy)
- Supporting HIV health decision-making by patients (improving anonymous access to accurate information about HIV to improve health-seeking behaviour among vulnerable groups)
- Enhanced clinical decision support for advanced HIV disease.

The fifth new innovation and technology project, co-funded by the SAMRC and Grand Challenges Canada, is aimed at addressing the impacts of climate on health through the development of the next generation mosquito nets to control insecticide resistant mosquitoes. Further to this, three additional research grants (indicator 2.3.1), also co-funded by Grand Challenges Canada, were awarded to support research aimed at addressing the impacts

of climate and health. These projects address a wide variety of topics including educating youth at schools about the health impacts of climate and health and co-creating interventions to enable the youth to contribute towards the development of new solutions, creation of advanced warning systems for new malaria threats arising due to climate change, as well as the potential impact of climate change on exposure to air pollutants and biological allergens, and thus health.

During the current reporting period, the SAMRC continued to support the initiative of the African Union Development Agency (AUDA-NEPAD) to establish Grand Challenges national programmes in AU member states. Grand Challenges Malawi and Grand Challenges Rwanda were launched in 2023, and the SHIP/Grand Challenges South Africa programme manager was invited to be a panellist on both occasions to share lessons from South Africa.

The Newton Fund and International Science Partnerships Fund (ISPF)

The SAMRC-Newton Fund programmes are the result of a co-funding initiative with the UK MRC, established in 2015, that supports South African projects that respond to national health priorities while simultaneously contributing to global health advancement for social, economic and health impact. Since 2015, this partnership has funded several programmes focusing on the following areas: Translation Research in Non-communicable Diseases, Mental Health in South Africa, Tuberculosis Implementation Science, and Anti-Microbial Resistance: Drug Discovery and Antibiotic Accelerator, supporting a total of 21 projects across 12 institutions. While most of the programmes are now complete, some of the mental health projects as well as the AMR projects will continue into the next financial year.

The SAMRC has extended its collaboration with the UK through a new partnership with the UKRI MRC under the umbrella of the UK's International Science Partnerships Fund (ISPF) to address African health challenges. In February 2024, three new Requests for Applications were released seeking innovative proposals on non-communicable diseases; co-morbidity or multi-morbidity of infectious diseases and non-communicable diseases; and One Health, climate and health. The research should further improve our understanding of disease mechanisms, presentation and progression and inform innovative prevention and treatment strategies that are likely to be efficacious, cost-effective, affordable, potentially sustainable, and acceptable to the key stakeholders in Africa. The fund aims to support collaboration between researchers in South Africa and the UK and encourages the inclusion of scientists from other African countries as well as researchers from historically disadvantaged/resource-poor institutions in South Africa. The fund also aims to strengthen research capacity by supporting training/mentoring of the next generation of researchers, with a focus on those from previously disadvantaged ethnic groups and institutions.

mRNA Technology Transfer Hub

The mRNA Technology Transfer Hub is a partnership between the World Health Organization (WHO), Medicines Patent Pool (MPP), Afrigen Biologics (Pty) Limited, the Biologicals and Vaccines Institute of Southern Africa (Biovac), the SAMRC, and the Africa Centres for Disease Control and Prevention (Africa CDC). The main objective of the hub is to build mRNA vaccine research, development and manufacturing capabilities in South-Africa and other low- and middle-income countries to enable a more equitable response to future pandemics. The SAMRC established the South African mRNA Vaccine Consortium (SAMVAC) in 2022 to drive the research, development and testing of mRNA vaccine candidates, focusing on the priority diseases of South-Africa and Africa. SAMVAC comprises of leading institutions across South Africa involved in vaccine R&D, including the University of the Witwatersrand, the University of Cape Town, the African Health Research Institute, the University of Stellenbosch, North-West University, the National Institute for Communicable Diseases, the SAMRC and Afrigen Biologics.

The WHO and MPP co-hosted a four-day mRNA Summit in Cape Town from 17th-21th April 2023. This prominent meeting was attended by Dr Tedros Ghebreyesus, Director-General of the World Health Organization, Dr Joe Phaahla, Minister of Health, and Dr Blade Nzimande, Minister of Higher Education, Science and Technology. The latest data presented at the meeting confirmed that SARS-COV-2 (COVID-19) vaccines were no longer a priority for the mRNA Technology Transfer Hub, and that all projects previously focused on COVID-19 were to realign their scope towards other diseases of interest for their respective context.

After the mRNA Summit, the Scientific and Technical Review Committee of the hub recommended deprioritisation of the development of vaccines for the Omicron BA1 variant. GIPD thereafter hosted the first SAMVAC Strategic Committee Meeting on 20th June 2023 to evaluate the status of the active projects and strategize on the next steps. The SAMVAC Strategic Committee comprises SAMRC representatives, local funders and key members of SAMVAC and was established to proactively review the SAMVAC programme and to ensure the programme remains responsive to the SAMVAC objectives. The Committee concurred with the deprioritisation of COVID-19 activities and recommended downscaling COVID-19 genomic surveillance, inclusion of wastewater surveillance, and shifting priorities to focus on an expanded TB programme, continuation of the HIV programme and inclusion of a third disease for Africa, Rift Valley Fever. These projects are all making good progress and will be expanded in 2024.

Gathering of key local and international stakeholders at the mRNA Summit held in Cape Town from April 2023.

Project Africa GRADIENT

(Genomic research approach for diversity and optimising therapeutics)

Project Africa GRADIENT is an innovation funding programme established between GlaxoSmithKline R&D Ltd (GSK) and Novartis SA (Pty) Ltd and administered by the SAMRC's GIPD unit, with a primary focus on assessing genetic diversity's role in variability concerning drug exposure, efficacy, and safety for treating TB and malaria in Africa. Nine projects were awarded in 2022 and are now in their second years, with the projects yielding significant data and creating valuable databases.

On 6th February 2024, the SAMRC hosted the 2nd Project Africa GRADIENT workshop, following the success of the 1st workshop held in 2022. The workshop was attended by GSK and Novartis representatives from Spain and the UK and principal investigators, collaborators, and students who travelled from Burkina Faso, Mali and various South African provinces to attend the face-to-face workshop. The workshop aimed to cultivate the existing GRADIENT community, fostering collaborations among principal investigators and ultimately establishing a central genomics database consolidating research outcomes and making them accessible to all.

The programme is receiving good publicity. Stellenbosch University led an Editorial, in collaboration with the GRADIENT principal investigators, titled "Advancing Pharmacogenetics Research in Africa: The Project Africa GRADIENT Initiative," which was published in February 2024. In March 2024, GSK and Novartis launched a media campaign, on LinkedIn and X (Twitter), profiling the various projects to promote the programme and its outcomes.

Participants from GSK in Novartis, and project team members from various African countries gathered at the SAMRC Cape Town on 6 February 2024 for the 2nd Project Africa GRADIENT workshop.

HeLTI

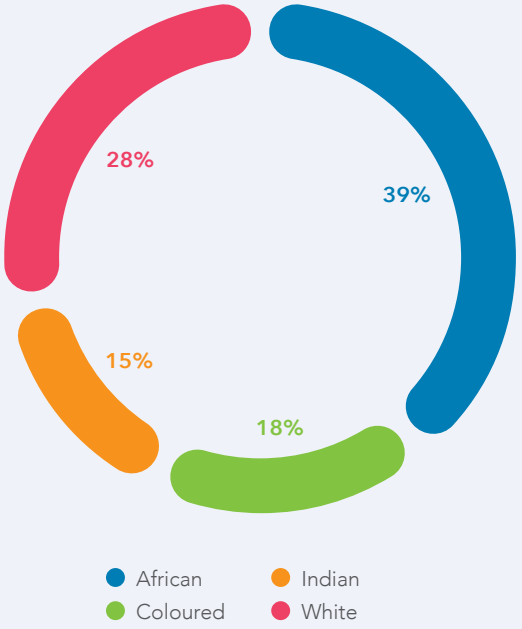
The SAMRC's partnership with the Canadian Institutes of Health Research (CIHR) for the Healthy Life Trajectories Initiative (HeLTI) was renewed for a further 5 years in 2022 to enable the research teams from South Africa and Canada to continue an important pre-conception to early childhood intervention study to prevent obesity and non-communicable diseases. This forms part of a broader international HeLTI collaboration that includes harmonised intervention studies in South Africa, Canada, India and China. The SAMRC is supporting the South African BUilding Knowledge and a foundation for HeALthy lIfe trajectories: BUKHALI Trial led by the University of the Witwatersrand. BUKHALI is a randomised controlled trial to test the efficacy of a complex continuum of care intervention. Starting at pre-conception and continuing through pregnancy, infancy and childhood, the intervention is designed to improve nutrition, physical and mental health, and health behaviours of South African women to offset obesity-risk (adiposity) in their offspring. Women aged 18-28 years have been recruited from Soweto, an urban-poor area of Johannesburg. The primary outcome is dual-energy x-ray absorptiometry derived fat mass index (fat mass divided by height2) in the offspring at age 5-years. Community health workers are delivering the intervention randomly to half the cohort by providing health literacy material, dispensing a multi-micronutrient supplement, providing health services and feedback, and facilitating behaviour change support sessions to optimise nutrition, physical and mental health, and lay the foundations for healthier pregnancies and early child development. The project completed its 7th year in 2023/24 and involves 9 PhDs (4 graduated), 13 postdoctoral fellows and 15 nested sub-studies and publications. The SAMRC is also supporting 6 projects at other South African institutions to utilise the HeLTI data and samples to address additional priority research questions.

A highlight in 2023/24 was the convening of the annual HeLTI Council meeting for the first time in-person since 2019 in Cape Town in April 2023. Director-General of the World Health Organisation, Dr Tedros Ghebreyesus, and South African Minister of Health Dr Joe Phaahla attended a short session at the meeting and received the headline findings to date from the study to inform policy and practice.

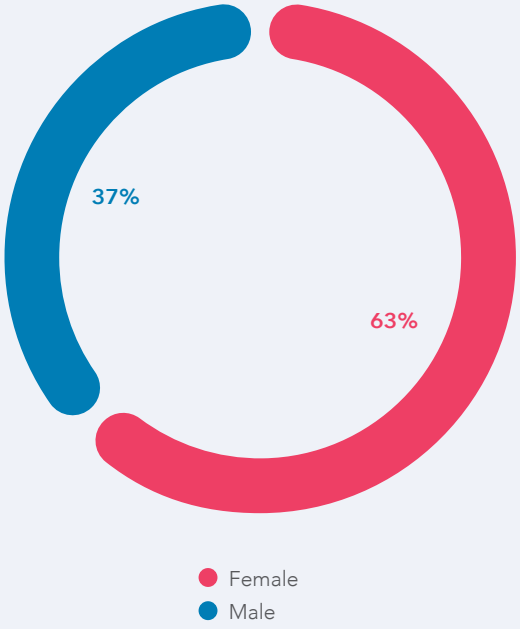
Self-Initiated Research Grants

The Self-Initiated Research (SIR) programme provides grants of up to R200,000 per annum for 3 years to early and mid-career researchers in a variety of health disciplines and priority areas. The total 2023/24 SIR portfolio comprises 137 grants, of which 134 received a disbursement this financial year, with the distribution of these by ethnic group, gender and institution shown in the figures below. Application of a transformation matrix has resulted in a year-on-year increase in the number of awards to black applicants, with the total proportion of awards to black applicants increasing from 27% in 2012/13 to 72% in 2023/24.

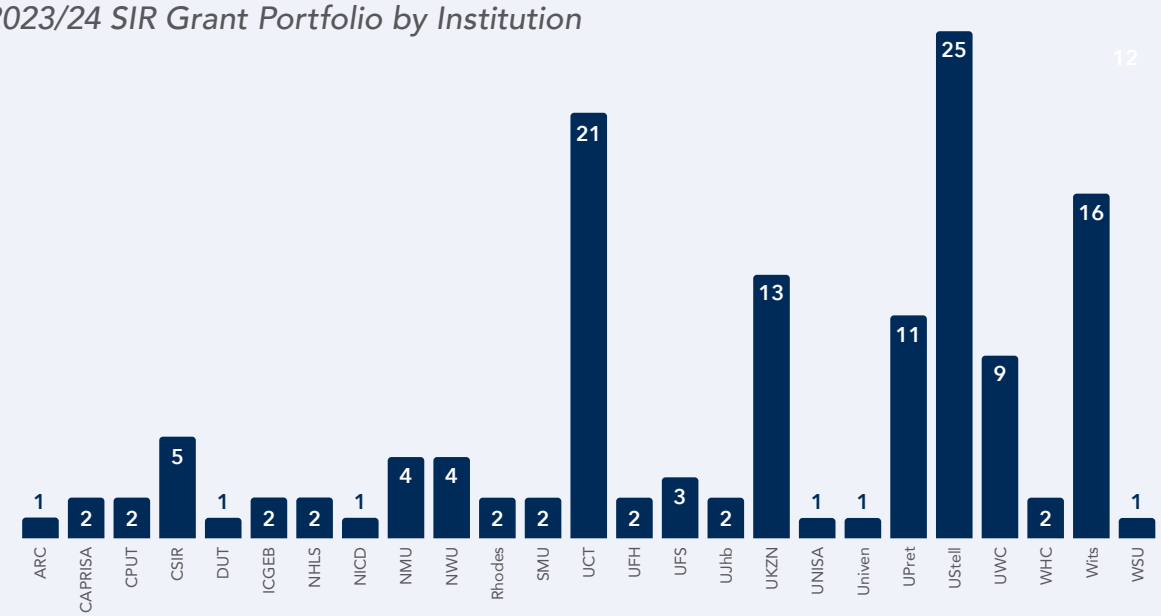
2023/24 SIR Grant Portfolio by Race



2023/24 SIR Grant Portfolio by Gender



2023/24 SIR Grant Portfolio by Institution



A new request for applications for SIR grants was issued in May 2023 with a closing date for submissions in June 2023. Proposals were invited in the following 12 research priority areas: HIV and TB; other infectious diseases including antimicrobial resistance; maternal, infant and child health; non-communicable diseases; brain, behaviour and mental health; injury and interpersonal violence; occupational and environmental health; health systems, health economics, Universal Health Coverage and National Health Insurance; African traditional medicines; vaccines, diagnostics and drug discovery; disease prevention and health promotion; and One Health. Online information sessions with prospective applicants were held prior to the submission date and this resulted in a significant increase in the number of applications received – 303 in 2023 versus 169 in 2022. The SAMRC also received fewer incomplete, ineligible and non-responsive applications. The applications have been peer-reviewed by national and international reviewers and approximately 40-50 awards will be made starting in the 2024/25 financial year.

Other Initiatives

Chan Soon-Shiong Family Foundation (CSSFF)-SAMRC Biomanufacturing Capacity Development Programme

The SAMRC commenced a collaboration with the Chan Soon-Shiong Family Foundation (CSSFF) on a Biomanufacturing Capacity Development Programme during 2022/23. The collaboration is funded by a R100 million donation from the CSSFF and a R12 million contribution from the SAMRC. The programme currently has 4 components. The first involves providing technical training to graduates to equip them to work in a commercial biomanufacturing environment, including training in laboratory science, process engineering, quality assurance and scientific and research processes, such as experimental design and scientific writing. The training is delivered by the SAMRC's Biomedical Research and Innovation Platform (BRIP) and the Universities of Cape Town and Stellenbosch. Promising candidates who complete these studentships are offered industry internships or opportunities for postgraduate studies upon completion of their training. The first call for studentships was launched in August 2022 and 2 cohorts of students have completed training to date. The first cohort of 15 trainees commenced their training in February 2023 and the second cohort of 11 started training in July 2023. Of these, around 60% received placements for short-term industry internships. The SAMRC offered internships to 4 students from cohort 1 who are now trainers of cohort 3 in 2024. As part of their training, the interns were sent to Immunity Bio in Los Angeles in November 2023 for advanced training. A third cohort of 21 initiated their training in February 2024.

CSSFF SAMRC Interns and SAMRC Trainers Meeting Dr Patrick Soon-Shiong at ImmunityBio in Los Angeles, November 2023.

The programme further includes scholarships for master's and doctoral degrees. A total of 11 candidates (6 MSc and 5 PhD), selected through an open competitive call for applications, are being funded to complete their studies, focussing on a variety of vaccine-related topics with the aim of building the next generation of vaccinology researchers. A fourth component involves the provision of scholarships for medical students at Nelson Mandela University to complete their medical training. The first cohort of 7 medical students was funded during 2023 and a second cohort will be funded from 2024 for the duration of their studies. The studentships are managed by the SAMRC's Biomedical Research and Innovation Platform and the scholarships are administered by the Research Capacity Development division.

As a result of these activities, the SAMRC co-authored a training hub consortium proposal led by the CSIR. The proposal avoids duplication of activities and provides a concept document for the government to use with international partners. The concept proposal also includes the mRNA hub programme, the GAVI Africa strategy, and an SAMRC conducted analysis of the skills gaps. 2023 was also a very busy year where the SAMRC took centre stage in Africa as follows:

- Along with Paster Institut Dakar, Africa CDC organised a workshop in Dakar on African workforce development.
- Professor Richard Gordon was appointed as Chair of the Africa CDC PAVM Talent Development Taskforce.
- Professor Richard Gordon chaired the CHPIA meeting in December 2023 in Lusaka for the launch of the detailed African analysis and competency framework.

With the above-mentioned initiatives, the CSSFF-SAMRC capacity development programme is growing the next generation of vaccine professionals, researchers, and technical experts, building much-needed capacity and infrastructure, and establishing a network through which vaccine R&D and innovation can be nurtured and thrive. Ultimately, this is aimed at growing the industry, contributing to the economy and ensuring that LMICs, including South Africa, are prepared to rapidly respond to the next pandemic. The overwhelming majority of all recipients of the CSSFF-SAMRC awards are graduates from HDIs as the programme targets and focuses on realising transformation and building capacity in health and science disciplines. During 2024 the internships are being expanded to include engineering and regulatory internships.

Sub-Saharan Africa Funder's Forum

In early 2022, the SAMRC received a grant from the New Venture Fund to support the coordination of health research and innovation funders in sub-Saharan Africa. The funds were allocated to host meetings where relevant funders share strategies and coordinate approaches to fund projects and initiatives addressing priority health problems in the region. The journey began modestly in May 2022 with a gathering of over 30 organisations exchanging insights on focus areas and funding strategies for the Southern African Development Community (SADC). The initiative, now called the African Health Research and Innovation Funders Forum, has transitioned to encompassing the entire African continent. This shift highlights its potential to become a prominent fixture in Africa, with a core emphasis on prioritising African health needs, preventing funding duplication, and fostering collaboration among funders. This momentum carried into a thematic meeting in November 2022, where participation expanded to over 50 funders, leading to the formation of a dedicated working group focused on enhancing drug manufacturing in Africa.

The third forum, held in August 2023, marked a significant milestone with a notable 150% increase in attendance. Over 100 delegates from 60 active funding bodies worldwide convened at the picturesque Asara Wine Estate. The discussions covered critical thematic areas such as Maternal, Neonatal, and Child Health; Precision Medicine; Vaccines and Medical Device Manufacturing; Climate Change and Health, and Infectious Diseases. A notable outcome was the introduction of Satellite meetings, designed to deepen discussions on key topics. The first of these sessions, focusing on Climate Change and Health, is scheduled for May 7th and 8th 2024 in Cape Town.

Looking ahead, the fourth AHRIFF Funders Forum, scheduled for September 2024, is poised to build upon these collaborative efforts, driving impactful initiatives and forging enduring partnerships across the African health research and innovation funding landscape.

Innovation

Innovation is supported by GIPD both internally and externally. The unit manages funding programmes aimed at delivering new health solutions, including the SHIP programme and Grand Challenges South Africa. It also hosts the SAMRC's Technology Transfer Office (TTO), the Global Health Innovation Accelerator (GHIA) and the Medical Device and Diagnostic Innovation Cluster (MeDDIC), all of which provide innovation support to protect and advance technologies towards commercialised products to address strategic goal 3 of the SAMRC.

Technology Transfer Office

The SAMRC's Technology Transfer Office is responsible for managing the SAMRC's compliance with the Intellectual Property Rights from the Publicly Financed Research and Development Act. Its primary mandate is to identify, evaluate, protect and, where possible, commercialise Intellectual Property (IP) developed by SAMRC researchers and to raise awareness of IP issues within the organisation. The TTO also advises on IP issues in contracts with external parties. One new invention disclosure was received during 2023/24 financial year. This disclosure relates to a product which reduces the leaching of chemicals into food in traditional cooking methods that continue to be used in LMICs.

Global Health Innovation Accelerator

GHIA is a partnership between the SAMRC and PATH aimed at facilitating the late-stage development and introduction of affordable and appropriate technologies in South Africa and Africa more broadly. GHIA's activities include managing a portfolio of product development projects aimed at developing new solutions for global health as well as broader health innovation ecosystem development. GHIA encompasses the original partnership with PATH, largely funded by a grant from the BMGF, the Medical Device and Diagnostic Innovation Cluster (MeDDIC) programme, funded by TIA with funds from the DSI, and the SAMRC-TIA Seed Fund programme. GHIA is also expanding its network and activities into other countries in sub-Saharan Africa through a second grant received from the BMGF. There have been several engagements during the 2023/24 financial year with prospective innovation partners in East and Southern Africa and these will be pursued through in-person engagements in 2024. A representative from the SAMRC participated in the inaugural Transforming African Medtech Conference (TAMC) which was held in Nairobi, Kenya during August 2023, where enabling policies and their implementation were highlighted. The SAMRC's contribution revolved around the initiatives that South Africa is leading to support the development of medical technologies. The South African government's pivotal role in investment, growth and the evolution of the medical technologies sector was highlighted.

MeDDIC

The Medical Device and Diagnostic Innovation Cluster (MeDDIC) is a national initiative supported by the Technology Innovation Agency and the Department of Science and Innovation to stimulate and intensify technology innovation within the medical devices and diagnostic sector as well as encourage an integrated health innovation ecosystem. The cluster is seeking to address some of the main challenges faced by the medical devices and diagnostics innovation and manufacturing sector through a range of interventions as outlined below.

Support to SAHPRA for a medical devices database. The South African Health Products Regulatory Authority (SAHPRA) is responsible for regulating the manufacture, import, export, distribution and sale of medical devices in South Africa and all organisations undertaking such activities are required to apply to SAHPRA for an establishment license with a list of products. These applications have been received manually since the inception of the regulations, which has inadvertently resulted in discrepancies in the information received across the suite of establishment licences and challenges in capturing and analysing the data. Funding was provided to SAHPRA to capture the product data electronically and to assess the existing information gaps and identify areas of improvement that will be used when implementing a digital system in the future. This work is now complete and several information gaps and opportunities for improvement have been identified. The project has also assisted SAHPRA to identify the types of medical devices circulating in the market, the groupings according to risk classification, and the additional spares, accessories and research use-only products. The information will further be used to finalise the structure of the medical devices and diagnostics registration fees.

The MeDDIC regulatory support programme is managed by the CSIR Industrial Sensors Impact

Area within the manufacturing cluster due to their ISO13485 certification and extensive experience in medical device and diagnostic development. It is aimed at assisting local companies, entrepreneurs, and higher education institutions to understand and manage the medical device product development process, particularly as it relates to regulations. This programme was provided with additional funds in 2023/24 to continue providing assistance with the regulatory approval process, including product development in the context of ISO13485, classification and identification of medical devices and related standards. To date, the programme has supported 17 companies. One of the companies supported by MeDDIC and this programme received follow-on funding from the IDC valued at just under R7 million.

The MeDDIC online platform, launched in February 2023, leverages the national Innovation Bridge Portal, an initiative of the DSI, developed by the CSIR and supported by the World Bank Group and the Department of Small Business Development, which is aimed at showcasing technology innovations and opportunities from South Africa and beyond. The dedicated medical devices portal within the Innovation Bridge is aimed at:

- Providing information on the medical devices sector, including manufacturers, products, innovators, development expertise, and support services;
- Increasing awareness of the players, capabilities and expertise in the medical devices and diagnostics sector in South Africa;
- Highlighting funding, partnering and licensing opportunities;
- Showcasing locally manufactured products and new innovations in development; and
- Facilitating stakeholder linkages and promoting increased collaboration in the sector.

While the platform was launched under the auspices of MeDDIC, the development of the portal was funded by a grant from the BMGF to GHIA.

Medical Devices and Diagnostics Technical Support Platform. A new initiative in 2023/24 was the establishment of a Medical Devices and Diagnostics Technical Support Platform to assist in bridging the gap between the identified need for technical support by medical device and diagnostics developers and innovators and access to the relevant resources, capabilities and infrastructure that can enable technology development, testing, registration, manufacturing and commercialisation. MeDDIC issued an open call requesting information from local service providers operating in this arena throughout the product development life cycle and received more than 50 responses. These service providers were invited to present an overview of their services to stakeholders during a 3-day online event and will be listed on the MeDDIC portal. GHIA and MeDDIC subsequently launched a request for applications to support medical device and diagnostics projects funded by the SAMRC towards commercialisation by providing access to such technical and advisory support to move their technologies towards market entry. Awards for this will be made in 2024.

SAMRC-TIA Seed Fund

The SAMRC is an implementing partner for the Technology Innovation Agency's national seed fund programme. In addition, the SAMRC and TIA are co-funding a specific seed fund programme for medical devices and diagnostics. The purpose of these seed funds is to assist in bridging financial requirements that translate research outputs into fundable ideas for further development. The following highlights were achieved during the 2023/24 financial year:

A provisional patent application was filed for a device which reduces kinking of IV tubing. Kinking poses a significant risk to patients as it can lead to blockage of critical drugs, which can lead to blood clotting. This device ensures that the critical portion of the IV tubing does not kink.

Human Capacity Development. One postdoctoral candidate and four PhD candidates were trained during Financial year 2023/24 on various scientific techniques under 5 different seed fund projects. One of these projects undertaken by the University of the Witwatersrand additionally attracted a parliamentary grant for human capital development valued at R1 million.

Provision of local medical devices and diagnostics to national hospitals. A seed fund grantee was awarded a 5-year contract with the Free State Department of Health to supply and deliver a negative pressure wound therapy (NPWT) system in all South African national hospitals effective from 2023 to 2027. The grantee was awarded seed funding to complete clinical trials and update the designs for the locally manufactured NPWT with an innovative

wall suction component based on feedback from healthcare professionals. This device has been registered with SAHPRA for sale in South Africa.

South African Population Research Infrastructure Network (SAPRIN)

Prioritising responsive research through impactful interventions

The South African Population Research Infrastructure Network (SAPRIN) is a vital part of the Department of Science and Innovation's initiative to develop research infrastructure networks in South Africa. Comprising six Health and Demographic Surveillance Systems (HDSSs) across five provinces, SAPRIN includes three rural nodes in Agincourt, DIMAMO, and AHRI, and three urban nodes in GRT-INSPIRED, C-SHARP, and USINGA. We issued a request for applications for an additional node which will be in either the Free State, North-West, or Eastern Cape provinces. This will further expand the variance in the demographic data within the network.

Monitoring over 415,000 individuals from 113,728 households, SAPRIN captures data on 644,548 unique individuals, representing over 5.7 million person-years of observations. This extensive cohort provides valuable insights into the quadruple burden of disease and internal migration patterns within the country, despite not being nationally representative.

The comprehensive data collected by SAPRIN facilitates the transferability of findings to similar contexts and the calibration of national data sets, such as those of Statistics South Africa. This capability significantly enhances the understanding of health and demographic trends in South Africa, helping to inform decision-making and policy formulation. SAPRIN data highlighted the high prevalence of internal migration, particularly among young adults, with temporary out-migration rates increasing and permanent migration rates declining, contributing to the Migration Profile Report of South Africa, 2023.

Longitudinal data's value lies in its ability to reveal the life course trajectory of a community. The Health and Ageing in Africa: Longitudinal Studies in South Africa (HAALSA) study, based in Agincourt, Mpumalanga, explores the implications of ageing from birth to death on community health. By tracking these trends over time, the HAALSA study deepens the understanding of the complex interplay between ageing and community health in the African context.

Equitable capacity development for empowering communities

SAPRIN is deeply committed to nurturing the next generation of scientists and fostering their growth and development within the scientific community. As part of this commitment, we recently mentored a black African male data science intern, providing guidance and support as he honed his skills within this domain. The intern actively participated in various statistical and coding workshops, significantly advancing his proficiency, and laying a strong foundation for his future career in data science.

In addition to our mentorship initiatives, SAPRIN has also taken significant steps to promote equity and inclusivity within the scientific realm. Our first PhD fellowship, granted to a black male candidate from the University of Limpopo at the DIMAMO node, signifies a commitment to rectifying past injustices and advancing opportunities for historically marginalised institutions and individuals. By supporting this initiative, SAPRIN aims to contribute to a more diverse and inclusive scientific community, creating opportunities for both the recipient and the broader scientific landscape.

Furthermore, we recognise the importance of investing in the leadership and management capabilities of our team members. Our Data Scientist undertook a Management Development Course at the University of Stellenbosch, enhancing his leadership capabilities and ensuring that he is well-equipped to lead and manage our data science initiatives. Additionally, the Deputy Director, currently engaged in a management development programme at the SAMRC, is further refining his strategic management skills and ensuring that SAPRIN remains at the forefront of scientific research and innovation.

In addition, our Office Manager completed an advanced project management course at the University of the Witwatersrand, equipping her with the necessary tools to efficiently oversee and execute projects within SAPRIN.

Science for creating a healthier society

SAPRIN actively engaged in various community initiatives and educational programmes to promote science and community involvement. As part of the SAMRC GenS job-shadow school programme, SAPRIN hosted learners from low-income areas, providing them with the opportunity to interact with scientists and gain a deeper understanding of population science.

In another outreach effort, a group of science students from the University of Limpopo visited the SAMRC to explore diverse career paths in science. During this visit, the Deputy Director delivered an inspiring talk on public health, epidemiology, and population science, aiming to motivate and educate the students about the possibilities within these fields.

At the GRT-INSPIRED node, a successful solar project was piloted in Melusi, Pretoria where informal dwellings were equipped with solar panels to enhance their access to power. This initiative was well-received by the community, showcasing the positive impact of sustainable energy solutions.

Additionally, in the C-SHARP node, the Deputy Director engaged with community faith-based leaders in Nomzamo, participating in a community dialogue to promote research activities and foster collaboration within the community.

Furthermore, SAPRIN actively participated in the Science Forum of South Africa (2023), focusing on the theme of citizen science. The discussion emphasised the importance of involving communities in research processes, from design to execution and dissemination, highlighting the value of community engagement in advancing scientific endeavours and ensuring research relevance and impact. This was done in collaboration with the HIV and other Infectious Diseases Research Unit (HIDRU), demonstrating our commitment to collaboration between SAMRC units.

In celebration of 30 years of democracy in South Africa

As South Africa commemorates 30 years of democracy, SAPRIN's message and commitment resonates with the nation's pursuit of inclusivity, equity, and progress. Embracing the spirit of democracy, SAPRIN emphasises the importance of collaboration, partnership, and ethical research practices in advancing and reimaging the health and well-being of all South African communities. SAPRIN's vision extends beyond the present, envisioning a future where every community's voice is heard, where health disparities are addressed, and where inclusivity and equity are the cornerstones of our society.

SAPRIN is dedicated to building a robust and responsive research infrastructure, symbolising our commitment to promoting evidence-based decision-making and policy formulation. Through strategic partnerships with local communities, researchers, and policymakers, we co-create science that is not only impactful and relevant but also sustainable for generations to come.

Recognising the transformative power of interdisciplinary research, SAPRIN embraces collaboration across diverse fields to address complex health challenges and societal issues. By integrating perspectives from various disciplines, we enrich our understanding of health dynamics and social determinants and seek to foster innovative solutions that transcend traditional boundaries.

Our unwavering commitment to these principles propels us towards a future where every person living in South Africa enjoys improved health and well-being, underpinned by decolonial practices and interdisciplinary approaches that challenge historical inequities and drives meaningful change. As we mark this significant milestone in our nation's history, SAPRIN remains resolute in our mission to harness the transformative power of scientific research to drive positive change, foster social justice, and empower our communities.

RESEARCH CAPACITY DEVELOPMENT

Overview

The overarching objective of the SAMRC's Division of Research Capacity Development (RCD) is to enhance the long-term sustainability of health research in South Africa by providing funding for the next generation of health researchers. The division supports health research capacity development by offering scholarships, fellowships and research grants to post-graduate students, postdoctoral fellows, as well as early and mid-career scientists at South African universities. With most of these awards aimed at individuals from historically disadvantaged backgrounds, the division's activities are also contributing substantially to transformation in health research. In 2023/2024, RCD's programmes have continued to contribute to the SAMRC's strategic objectives of administering health research effectively and efficiently, leading the generation of new knowledge and building human capacity for the long-term sustainability of health research in South Africa.

RCD's programmes are divided into Scholarships and Grants as depicted in the figure below.

The number of beneficiaries and the amount invested in 2023/24 for each programme are listed in the Table below. The total number of 181 funded beneficiaries (grants and scholarships), including new intake for the 2023/24 reporting period, exceeded the annual target of 150 by 31 (20.7%). The total performance for the indicator 4.1.1 is 181 RCD and 3 GIPD, Grand total 184.

Scholarship Programme	Category	Number of beneficiaries	Amount invested
SAMRC Researcher Development Grant	PhD	6	1,207,319.79
Bongani Mayosi-National Health Scholars Programme	PhD	36	10,201,870.12
Biostatistics Capacity Development Programme	MSc	4	645,000.00
SAMRC Clinician Researcher Development Programme	PhD	15	5,755,000.00
SAMRC Internship Scholarship Programme	PhD	27	5,204,514.45
The Chan Soon-Shiong Family Foundation Scholarship Programme	MSc and PhD	11	2,467,124.16
Total Scholarships		**99**	**25,480,828.52**
Grant Programme	**Category**	**Number of beneficiaries**	**Amount invested**
SAMRC Mid-Career Scientists	Scientists (PI)	11	15,665,065.00
SAMRC Research Capacity Development Initiative	Scientists (PI)	22	7,150,600.00
	Post-doctoral Fellows	9	3,325,000.00
	PhD	9	1,800,000.00
SAMRC Extramural Post-doctoral Fellowship Programme	Post-doctoral Fellows	5	1,750,000.00
SAMRC Intramural Post-doctoral Fellowship Programme	Post-doctoral Fellows	12	3,889,583.33
SAMRC Clinician Post-doctoral Career Development Award	Clinician post-PhD|	2	925,000.00
SAMRC Early Investigators Programme	Scientists (PI)	12	6,000,000.00
SAMRC-JHU HDI Capacity Development Grants for Investigator-Initiated Research: HIV Implementation Science in the Clinical Setting	Scientists (PI)	3	2,060,890.00
Total Grants		**85**	**42,666,138.33**
Totals		**184**	**68,046,966.85**

Similarly, for the number of awards to females MSc, PhD, postdoctoral fellows and early career scientists, 122 awards were made against a target of 110, which is 12% above the target. For the number of awards by the SAMRC to Black South African citizens and permanent residents MSc, PhD, postdocs and early career scientists classified as African, 121 awards were made, which was 12% above the target of 110. The number of awards by the SAMRC to MSc, PhD, postdocs and early career Scientists from historically disadvantaged institutions (HDIs), reflected a steady increase from 52 in 2021/22 to 60 in 2022/23, and 68 awards in 2023/24 (annual target of 80). This reflects the SAMRC's ongoing commitment to HDIs, in particular through the RCD Initiative.

RCD contribution to SAMRC revitalisation and grant and scholarship transformation

The SAMRC's Division of Research Capacity Development (RCD) is one of the business units that underwent a complete overhaul as a result of the 2012 SAMRC revitalisation. Before the revitalisation, the Division offered many small grants, wherein the smallest was R25,000 (twenty-five thousand rands) for a technical grant, and the highest was R110,000 (one hundred and ten thousand rands) for a PhD scholarship. Hence, one of the reasons for revitalisation was that the funding the Division was offering was neither competitive nor impactful. SAMRC restructuring led, in 2015, to the introduction of a new and well-established division of RCD that runs streamlined and responsive programmes to identified national research needs, directly contributing to National Targets for research capacity development and transformation. From 2014/2015 to 2023/24, the number of RCD awards has increased from 122 to 184, representing a 49% increase in the overall total number of awards. While the scholarship awards initially comprised 97% of RCD awards, since 2015/2016 research career development awards were introduced to effect research career development and student supervision, with the latter comprising 69% of RCD baseline budget in 2023/24. Since 2014/2015, the individual award amount has been increased in both scholarships from R110,000 to R266,000 and RCD grants from R25,000 to R488,000. Overall, RCD, with the support of the SAMRC President/CEO, has been a vital instrument for effective transformation in funding since the beginning of the revitalisation in 2015. For both scholarships and career awards, during the last 10 years, more than 70% of awards were granted to female beneficiaries and historically disadvantaged individuals (including African black, Coloured, and Indian). The SAMRC presence in HDIs has also been consolidated with the launch of the RCD initiative by the SAMRC President and CEO in 2015.

RCD Scholarships Portfolio

The scholarships portfolio at RCD comprises five main scholarship programmes as listed in the figure above. During this reporting period, RCD has also assisted with administration of the Chan Soon-Shiong Family Foundation Scholarship Programme which is aimed at building Biomanufacturing Capacity in Africa. The scholarships programmes are aimed at developing and transforming health research capacity in SA. The funded scholars within our programmes are mainly health professionals. By virtue of being employed in healthcare settings, health professionals are ideally placed to carry out clinically driven research, with an increased likelihood of research findings being taken up by policymakers, practitioners, and other potential users. The scholarship programmes have continued to make excellent progress in transformation and strengthening research capacity. In 2023/24, RCD supported 95 PhD and 4 MSc scholarships, of which 68% were awarded to female candidates and 67% to African black candidates. The distribution of scholarships by gender, ethnic group, and institution for 2023/24 are depicted in the figure below.

Due to the increased demand for PhD funding over the years, RCD has predominantly funded PhD candidates and prioritised MSc candidates who are in strategic or scarce skills such as demography, biostatistics and genomics. However, due to the paucity of statisticians in South Africa, RCD has only been able to recruit a handful of candidates specialising in biostatistics across RCD scholarship programmes. It has become clear that there is a need to attract other disciplines in health research such as statistics, data science, engineers and computer science for the purpose of solving the most pressing and complex health challenges that require an interdisciplinary approach, such as developing diagnostics and medical devices and epidemiological modelling. Although the importance of biostatistics in conducting and translating health research into clinical benefit has always been known, the paucity

of statisticians in South Africa makes it difficult to create and sustain a pool of experts specialising in biostatistics. In this financial year, RCD ran a request for applications to recruit masters candidates in an effort to build capacity in this strategic field and successfully recruited an additional MSc Biostatistics candidate, leading to a total of four students supported for this financial year, all African black, of which two are female and two registered at HDIs. All four students have a strong foundation in statistics or mathematical statistics. It is anticipated that the funded students will in future provide statistical support for health research studies or lead statistical studies.

Over the years RCD has intentionally increased participation from historically disadvantaged groups particularly South African black and women. In the year under review, 33 scholars graduated (30 PhDs and 3 MSc). Amongst recently completed scholars are Dr Takalani Mbedzi, a lecturer at University of Venda, Dr Thendo Makhado, a junior lecturer at University of Venda, and Dr Makweni Sibuyi, a lecturer at Sefako Makgatho Health Sciences University. This is an important contribution as it adds to the national goal of increasing the number of academics with PhD qualifications in historically disadvantaged institutions. Moreover, HDIs are rural-based and therefore researchers in these institutions are well-positioned to respond to or address healthcare problems in rural communities through policy-relevant analyses, implementation science, and basic and translational research. Developing health and clinical research capacity in HDIs will broaden and deepen the involvement of these health and clinical researchers in rural communities, to ensure equitable access to quality health care services and consequently improve healthcare delivery. The recently graduated scholars also act as agents of social change as they do not only investigate the issues affecting marginalised groups but partner with them in their work to drive societal transformation. Dr Babalwa Tyabashe-Phume, a social worker funded under the Bongani Mayosi National Health Scholars Programme, through her PhD study, developed a conceptual framework to ensure that people living with intellectual disabilities are included when developing social and health-related policies in South Africa. Dr Thendo Makhado funded under the Researcher Development Programme developed an Epilepsy Life Skills Education Guidelines for Primary Schools in the Limpopo and Mpumalanga provinces, with the goal of fostering an inclusive learning environment for all children. Moreover, she facilitated a partnership between the University and a local special school, working to empower and educate parents of children with special needs.

Impact of RCD Scholarship Funding

One of the ways we assess the impact of the SAMRC scholarships on individual recipients is to look at their career progression, research outputs, and research awards. During this reporting period, two emerging researchers Dr Thendo Makhado, a junior lecturer in nursing at the University of Venda funded under the SAMRC Researcher Development Programme, and Ms Ramakgahlela Betty Sebati, a PhD student funded under the SAMRC Internship Scholarship Programme, received the 2023 DSI-Ndoni Mcunu Fellowships: Doctoral Awards category at the South African Women in Science Awards (SAWiSA) under the emerging researcher category. Additionally, Ms Ramakgahlela and Dr Lerato Rametse funded under the Clinician Researcher Development Programme were among 635 young scientists from around the world selected to attend the 72nd Lindau Nobel Laureates. The two were amongst only nine South African young scientists who had the privilege of attending. Additionally, Dr Rametse was one of only 40 young scientists selected to present their research in the Next Generation Sessions. Ms Phindile Ngobese, a PhD student funded under the Bongani Mayosi National Health Scholars Programme presented her PhD research at the Society for Research in Nicotine and Tobacco (SRNT) annual meeting 2024 which was held in Edinburgh, Scotland. These achievements are testament to the world-class research conducted by RCD-funded scholars and that the SAMRC is developing global leaders of tomorrow.

The success of the SAMRC scholarship programmes is also reflected in the investments received. During this reporting period RCD received R10 million (including VAT) from the Public Health Enhancement Fund (PHEF) for the BM-NHSP programme, the most prestigious and nationally competitive health science scholarship programme. Since its inception, the BM-NHSP has awarded funding to 170 scholars of which 108 scholars (96 PhD and 12 MSc) have graduated to date. The latest cohort of scholars comprises 6 PhD candidates, all registered in HDIs.

RCD Grant Portfolio

The purpose of the RCD grant programmes is to create an opportunity to fast-track and transition early- and mid-career scientists to independent research leaders. The distribution of grants/career awards by gender, ethnic group, and institution for 2023/24 are depicted in the figure below.

The RCD Grants portfolio has continued to increase the total number of beneficiaries supported, with 82 in 2023/24 compared to 74 in 2022/23, 72 in 2021/22, and 51 in 2020/21. During the financial year, the RCD Grant Portfolio ran four requests for applications with an overall intake of 13 new beneficiaries. There has been a renewed focus on transformation and capacity building in HDIs and other under-resourced institutions, with 60% of all RCD grant awards being hosted by HDIs and other under-resourced institutions and 15% by SAMRC intramural research units. Overall, 63% of the RCD Grant beneficiaries in 2023/24 were female, 89% were black, and 66% were African black. The priority research areas funded include, inter alia, HIV, TB and other infectious diseases, non-communicable diseases, COVID-19, health systems, public health, maternal and child health and biomedical research. RCD Grants programmes have more than 55% of grant holders being hosted by previously disadvantaged institutions, including the University of Fort Hare, University of Zululand, University of Limpopo, University of Venda, Mangosuthu University of Technology, Walter Sisulu University, Sefako Makgatho Health Sciences University, and the University of the Western Cape.

Impact of RCD Grant Funding

The RCD grant beneficiaries' publications increased in 2023/24 as compared to 2022/23. The total number of students who worked on the funded projects was 186, with 143 of these being female. This demonstrates how the RCD grant programmes are developing the next generation of researchers who are leading the generation of new knowledge. The number of postdoctoral fellowship and early investigator programme awards constituted 50% of all RCD grant awards, supporting the priority to grow the research capacity development pipeline.

The impact of RCD career support extends beyond the lifetime of the award. Former and current RCD beneficiaries are generally successful at raising research funding and obtaining employment, and recognition in their specific field – as in the case of Associate Professor Shahida Moosa and Dr Jacqueline Womersley. Both are beneficiaries of the SAMRC's Early Investigators Programme. With her recent research in rare disease, Prof Moosa earned recognition in South Africa and on the global stage with the John M. Opitz Young Investigator Award from the American Journal

of Medical Genetics. Dr Womersley was appointed to Co-Chair The International Society of Traumatic Stress Studies (ISTSS).

In the recent SAMRC Scientific Merit awards, five current and past RCD Grant holders won the SAMRC Career awards, showcasing their expertise and their national competitiveness. Two bronze awards were won by Professor Olanrewaju Oladimeji: former Research Capacity Development Initiative grant holder, Head of Research and Doctoral Programmes, Sefako Makgatho Health Sciences; and Associate Professor Shahida Moosa: current Early Investigators Programme beneficiary, Head of Medical Genetics at Tygerberg Hospital. One silver award was won by Professor David Katerere: current Mid-career scientist programme beneficiary, Professor of Pharmaceutical Sciences, Tshwane University of Technology. Two gold awards were won by Professor Alan Gilbert Christoffels: former Mid-career scientist programme beneficiary, Professor of Bioinformatics at the University of the Western Cape and Director of the South African National Bioinformatics Institute and the SAMRC Bioinformatics Research Unit based at UWC; and Professor Pascal Obong Bessong: Professor in Microbiology and Global Health at the University of Venda and founding Director of the SAMRC-UNIVEN Antimicrobial Resistance and Global Health Research Unit.

Celebrating Women's Excellence in the SAMRC Research Capacity Development Programmes

The RCD showcased recent achievements of four exceptional women: Dr Jacomina du Plessis (Bongani Mayosi National Health Scholars Programme), Associate Professor Monate Nqobile Mkolo and Professor Afsatou Traore (Research Capacity Development initiative at selected Historically Disadvantaged Institutions), and Professor Salome Maswime (Mid-Career scientist Programme). These accomplished women demonstrate the impact of SAMRC's ongoing research capacity development funding models and its commitment to the advancement of women scientists.

Dr Jacomina du Plessis has recently graduated with a PhD in Dietetics from North-West University and is one of the few dieticians funded by RCD. The scholarship has enabled her to explore numerous academic opportunities, including being able to participate in the Wellcome Genome Campus and Sanger Institute Advanced Course in Genetic Analysis of Population-based Association Studies in the United Kingdom, as one of only 30 participants across the globe.

Professor Mkolo's journey has been marked by significant strides in her research area, along with her oversight of post-doctoral researchers, MSc students, and PhD students at Sefako Makgatho Health Sciences University (SMU). Her journey has been greatly influenced by RCD grant funding through the Research Capacity Development Initiative (RCDI) Programme. She has not only accelerated her research journey but also propelled herself to the position of Associate Professor at SMU. "I have been tremendously privileged to receive SAMRC funding, which has been instrumental in advancing my research training and accelerating my journey towards becoming an established researcher," Professor Mkolo shares.

Tuberculosis (TB) research and unwavering commitment to medical science have led Professor Traore to accomplish remarkable achievements at the University of Venda. Her journey with the SAMRC began in October 2020 when she became a beneficiary of RCDI grant. This has propelled her research career and led to her recent promotion to full professorship. Her C3 rating by the National Research Foundation (NRF) highlights her significant contributions to her field and positions her as an influential member of the academic community.

Professor Maswime, a grant beneficiary under the Mid-Career Scientist Programme, is the head of the Global Surgery Division at the University of Cape Town. Her passion and innovative thinking have led to the development of a comprehensive Global Surgery curriculum at the university. Under her guidance, the division has produced graduates, published influential research, and established impactful partnerships across African countries. Furthermore, as a result of the Mid-Career Scientist grant funding, she has contributed to several peer-reviewed publications in the last five years. Professor Maswime's outstanding contributions to the field earned her a recent promotion to full professor in 2022, and the prestigious National Science and Technology Forum (NSTF) SAMRC Clinician Scientist Award for 2023. Professor Maswime, added, "Through the SAMRC's support, I've been able to lead my research independently and develop my chosen area of interest."

SAMRC hosts the SA-UK DHET Doctoral Training Programme Delegation to boost Staff Capacity Development at Historically Disadvantaged Institutions

On 1st November 2023, in the continuous effort to strengthen the research capacity at selected Historically Disadvantaged Institutions (HDIs), the SAMRC, through its division of Research Capacity Development (RCD), received a delegation of the beneficiaries of the UK-SA DHET Collaborative Doctoral Training Programme to capacitate academic staff members at HDIs. The delegation consisted of 22 staff members working in health sciences faculties at three HDIs, namely, Sefako Makgatho University (SMU), University of Fort Hare (UFH), and Walter Sisulu University (WSU), as well as the Universities of Stirling (UoS, UK) and Cape Town (UCT). The collaborative training programme is co-funded by the Department of Higher Education and Training (DHET), through the University Capacity Development Programme (UCDP), and the British Council. Thus far, it has offered 10 PhD scholarships to staff to enhance their research and academic development. The objective of their visit was to explore the grant funding opportunities provided by SAMRC and how SAMRC can be involved in the SA-UK/DHET HDI Partnership programme. The visit was initiated by Professor Alison September, a beneficiary of the SAMRC Mid-Career Scientist Programme at UCT, and one of the supervisors in the SA-UK DHET Doctoral Training Programme leading the PhD training in South Africa; guiding 10 university staff from previous HDIs to obtain their PhDs.

Professor Mzikazi Nduna, Dean of the Faculty of Health Sciences at UFH, emphasized the benefits of the programme at an institutional level, underlining the commitment of the academic leadership to this collaborative initiative. Professor Seekoe, who is also a SAMRC board member, highlighted the programme's role in strengthening capacity development of HDIs and the need for increased support to raise the number of academics with PhDs. The SA-UK DHET Doctoral Training Programme's involvement, and the participation of past SAMRC beneficiaries, reflects the impact of SAMRC funding. This visit provided a tangible platform for staff from HDIs to gain valuable insights into grant funding opportunities and the tools necessary to enhance their research capacity to attract SAMRC support for their collaborative efforts.

SAMRC RCD hosts Capacity Building Conference

Bringing together over 170 grant and scholarship holders who are funded by RCD, the RCD Beneficiary Conference was held on the 20th and 21st of November 2023 in a hybrid format, with the in-person component hosted at the SAMRC Conference Centre (Cape Town). The theme of the conference was "Open Science for accelerating sustainable health research, collaboration, and partnerships". This gathering aimed to provide an opportunity for networking and visibility for early-career and emerging researchers, foster collaborative discussions, and spotlight the progress achieved by these individuals. The conference was structured to cater to the specific needs of Mid-career, Early-career, and Emerging researchers; with featured sessions addressing both the technical aspects of science and non-technical skills required to navigate the evolving landscape of science and technology. The skills development workshops were presented in a masterclass format with topics proposed by conference participants, which included; (1) Intersection of AI and Health Science, (2) Navigating your Career as a Researcher: How to establish networks for work opportunities, mentorship, collaborations, funding and fellowships, (3) Behind the scenes of health and clinical research, (4) Exploring key challenges faced by researchers and how to overcome them, (5) Developing a growth mind-set for work-life balance, and (6) The Career Lounge: Beyond PhD, where to from here?. The event also featured a session where current and past beneficiaries shared their firsthand accounts of the impact of RCD funding on their research endeavours and career development. This session highlighted how RCD has over the years contributed to building the South African health research capacity pipeline. The impact videos from the conference can be viewed on the SAMRC website under RCD news and events.

GOVERNANCE

INTRODUCTION

Corporate governance embodies processes and systems by which an organisation is directed, controlled, and held to account. As a Section 3A public entity, corporate governance at the SAMRC is guided by its enabling legislation, the SAMRC Act 58 of 1991, the prescripts of the Public Finance Management Act 1 of 1999, as amended and the principles contained within the King Report on Corporate Governance. The SAMRC is accountable to Parliament for its performance and management of its budget.

The SAMRC Act provides for the appointment of a Board by its executive authority, the National Minister of Health. The Board as the accounting authority, in turn, is responsible for the corporate governance of the SAMRC. This includes fiduciary responsibilities and ensuring compliance with legislative and regulatory requirements. Furthermore, the SAMRC Board appoints the SAMRC President, who carries the responsibility for implementing the Board's mandate. The SAMRC President and CEO heads the SAMRC Executive Management Committee, which the SAMRC Act assigns responsibility for the day-to-day management of the organisation.

Parliament, the Executive and the Accounting Authority of the SAMRC are responsible for corporate governance.

Portfolio Committee on Health

Engagements:

- AR 2022/23 Presentation
- APP 2023/24 Presentation

Executive Authority

The Executive Authority of the SAMRC is the Minister of Health. The Accounting Authority of the SAMRC is the SAMRC Board, duly appointed by the Minister. The Practice Note issued by National Treasury dealing with the Submission of Corporate Plans requires the inclusion of the following in the Corporate Plan:

a. Five-year Strategic Plan

b. Annual Performance Plan

c. Governance Structures

d. Risk Plan

e. Fraud Plan

f. Financial Plan

g. Materiality/Significance Framework

The Executive Authority requires quarterly reporting from the SAMRC on prescribed dates. For the 2023/24 financial year, the following reports were submitted:

- Quarter 1 Report – submitted on 28 July 2023
- Quarter 2 Report – submitted on 31 October 2023
- Quarter 3 Report – submitted on 30 January 2024
- Quarter 4 Report – submitted on 30 April 2024

No issues were raised by the Executive Authority on reports submitted.

THE ACCOUNTING AUTHORITY/BOARD

Our Board

The role of our Board is set out in the South African Medical Research Council Act of 1991 and states that "the affairs of the SAMRC shall be managed and controlled by a Board, which shall, subject to the provisions of this Act, determine the policy and objectives of the SAMRC and exercise control generally over the performance of its functions, the exercise of its powers and the execution of its duties".

Board Charter

The Board Charter sets out the Board's role and responsibilities, as well as the requirements for its composition and meeting procedures.

The Charter is reviewed annually to ensure that the Board remains compliant with legislation and trends in corporate governance. The review of the Charter took place at the Board meeting held on 31st July 2023 and no amendments to the Charter were deemed necessary.

The Board Charter requires an annual assessment to be conducted of the Board, its committees, and individual members, including the Chairperson. The evaluation is in the form of a self-assessment completed by every member of the Board and was conducted in March 2024

The Board Charter details the role and responsibilities of the Board, as follows:

1. The Board is ultimately accountable and responsible for the management and control of the affairs of the SAMRC subject to the provisions of the SAMRC Act. The Board determines the policies and objectives of the SAMRC and exercises control generally over the performance of its functions, the exercise of its powers and the execution of its duties.

2. To the extent that it is not contrary to the provisions enabling legislation or the powers of the Executive Authority, the Board or its Committees have the responsibility to manage the conduct of individual members of the Board/Board Committee as the case may be, including referral to the Executive Authority for appropriate intervention.

3. The Board constitutes the focal point and custodian of corporate governance in the SAMRC by managing its relationship with management and stakeholders along sound corporate governance principles. Accordingly, the SAMRC must be headed and controlled by an effective and efficient Board, comprising of Executive and Non-Executive members in order to ensure independence and objectivity in decision-making.

4. The Board must appreciate that strategy, risk, performance and sustainability are inseparable and to give effect to this by:

    a) Contributing to and approving the SAMRC's strategy

    b) Satisfying itself that the strategy and business plans do not give rise to risks that have not been thoroughly assessed by management

    c) Identifying key performance and risk areas

    d) Ensuring that the strategy will result in sustainable outcomes

    e) Considering sustainability as a business opportunity that guides strategy formulation

5. The Board has absolute responsibility for the performance of the entity and is accountable for such Performance. As a result, the Board should give strategic direction to the SAMRC.

6. The Board must appoint and evaluate the performance of the President, Vice President, Chief Financial Officer and other members of the EMC and ensure that an effective succession plan is in place and adhered to for all key executive posts.

7. The Board must retain full and effective control over the SAMRC and monitor management in implementing Board decisions, plans and strategies.

8. The Board must ensure that the SAMRC is and is seen to be a responsible corporate citizen by having regard to not only the financial aspects of

the business of the SAMRC but also the impact that business operations have on the environment and the society within which it operates.

9. The Board must ensure that the SAMRC ethics are managed effectively.

10. The Board must ensure that the SAMRC establishes and maintains:

    a) effective, efficient, and transparent systems of financial management, risk management and internal control.

    b) a system of internal audit under the control and direction of an audit committee complying with, and operating in accordance with, the regulations and instructions which are set out in Sections 76 and 77 of the PFMA.

    c) an appropriate procurement and provisioning system that is fair, equitable, transparent, competitive and cost effective.

    d) a system for properly evaluating all major capital projects prior to the final decision on a project.

11. The Board is responsible for the governance of risk.

12. The Board is responsible for Information Technology (IT) governance.

13. The Board must ensure that the SAMRC complies with applicable laws and considers adherence to non-binding rules and standards.

14. The Board must approve and ensure that the SAMRC submits all reports, returns, notices and other information required by Parliament, the Executive Authority and Treasury.

15. The Board must appreciate that stakeholder's perceptions affect the SAMRC's reputation.

16. The Board must approve the SAMRC's five-year Strategic Plan before submission to the Executive Authority.

17. The Board must approve the SAMRC's Annual Report, Compliance Report(s), Strategic Plan and Annual Performance Plan before submission to the Executive Authority.

18. The Board must approve the SAMRC's Annual Financial Statements before submission to the Auditor-General and subsequently to the executive authority.

19. The Board must approve the SAMRC's budget for the financial year in the prescribed format before submission to Treasury and the executive authority.

20. The Board must take effective and appropriate steps to prevent irregular and fruitless and wasteful expenditure, losses resulting from criminal conduct, and expenditure not complying with the operational policies of the SAMRC.

21. The Board must ensure that the SAMRC conducts an independent institutional review every five years.

22. The Board must act in the best interests of the SAMRC by ensuring that individual members of the Board:

    a) adhere to legal standards of conduct.

    b) are permitted to take independent advice in connection with their duties following an agreed procedure.

    c) participate in the deliberations and are enabled to vote for the approval or rejection of a motion/proposal/or recommendation placed before them.

    d) disclose real or perceived conflicts to the Board and deal with them accordingly. As such, the Board must compile and retain a register of interests for all Board members and update this register once every year.

23. The Board should do everything necessary to fulfil its role set out above.

BOARD MEMBERS

PROF JOHNNY MAHLANGU
CHAIRPERSON

PROF BONGINKOSI CHILIZA
DEPUTY CHAIRPERSON

PROF TRACEY NALEDI

DR ZINHLE MAKATINI

MS DORIS DONDUR

PROF BRUCE BICCARD

PROF LUFUNO MATHIVHA

PROF MOSA MOSHABELA
(RESIGNED AUGUST 2023)

DR MZIWANDILE MADIKIZELA

PROF EMMANUEL MUKWEVHO

PROF RONELLE CAROLISSEN

PROF THANDISIZWE MAVUNDLA

PROF TIMOTHY TUCKER

PROF EUNICE SEEKOE

ADV DOROTHY KHOSA

PROF TAHIR PILLAY

PROF GLENDA GRAY
SAMRC PRESIDENT AND CEO

COMPOSITION OF BOARD

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Professor J Mahlangu	Member (Chairperson)	1 Nov 2016	n/a	• MBBCH (WITS) • MMED (Wits) • FCPath (SA) • BSc (Wits) • Cert Clin Haem (SA)	• Clinical Haematologist with special interest in haemostasis and thrombosis, clinical trials and other aspects of clinical and diagnostic haematology and pathology.	• BloodSA	• Board • Exco	6 3
Professor E Seekoe	Member	1 Nov 2019	n/a	• D Cur; • MBA Health; • M SocSc Nursing Education; • Advanced Diploma in Psychiatric Nursing Science; • B A Cur Nursing Education and Community Health Nursing; • Diploma in General Nursing Science and Midwifery; • Certificate in Reproductive Health (Family Planning); • Certificate in Quality of Health Services; • Certificate in Decentralisation of Health Services; • Certificate in Strengthening Human Resource in Health;	• Health Systems strengthening through mentoring and leadership.	• Vice-Chair, Sub-Saharan-FAIMER Regional Institute (SAFRI); • Albertina Sisulu Co-Director, Executive Leadership Programme in Health (ASELPH) SMT; • Chair, Joint Fundraising Committee member, PHASA and UFH Faculty of Health Sciences; • Co-Chair, Oversight Committee of (PHASA) and UFH Faculty of Health Sciences; • Chair, Planning, Organising and Fundraising Committee of the International Centenary Transformation in Higher Education, UFH.	• Board • R&D • Exco	6 2 3

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Professor E Mukwevho	Member	1 Nov 2019	n/a	• PhD Anatomy and Cell Biology; • MSc Molecular and Cell Biology; • BSc Honours Biochemistry; • Bachelor of Science; • MBA; • Certificate in Project Management; • Certificate in Financial Management.	• Obesity and Diabetes • Metabolic syndrome; • Mitochondrial Energy metabolism; • Epigenetics of the Obesogenes.	• Council Member of South Africa Society of Biochemistry and Molecular Biology (SASBMB)	• Board • ARIC	6 6
Professor T Tucker	Member	1 Nov	n/a	• MBChB; • PhD; • F.C.Path (SA)Viro	• Clinical Virology • Health Systems Strengthening • Digital health • Pathology Laboratory Service • Clinic-Laboratory-Interface • Public-private-partnerships	• SEAD Consulting (Pty) Ltd – Shareholder and board member • UCT SHAWCO NPO – Board Member • Mothers-2-Mothers NOP – board member • NIH Strategy Working group on HIV/AIDS – US Gov – Committee Member • UCT School of Public Health and Family Medicine – Adjunct Assoc. Professor • Tucker Family Trust Trustee	• Board • REMCO • EXCO	5 5 2

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Professor R Carolissen	Member	1 Nov 2019	n/a	• DPhil Psychology; • MA Clinical Psychology; • Higher Diploma in Education; • BA Hons Psychology; • Bachelor of Arts; • Registered Clinical Psychologist.	• Feminist social justice approaches to teaching and learning and critical community psychology perspectives on youth citizenship, identities, belonging and community engagement in educational contexts.	• Stellenbosch University, Maties Gemeenskapsdiens (Community Engagement): Chair of Board: (2018-2022) • Psychological Association of South Africa: Member of Council and Chair of Division of Community and Social Psychology (Sept 2015-Sept 2019) • Psychological Association of South Africa: Member of Council and Chair of standing committee: Equity and Redress, member of publications standing committee (that oversees matters related to the South African Journal of Psychology)	• Board • REMCO	5 4

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Advocate D Khosa	Member	1 Nov 2019	n/a	• Bachelor of Laws (LLB); • Master of Management: Public and Development Management; • Practice Management Training; • Design Thinking Course; • Labour Dispute Resolution Practice; • Certificate in Principles of Business and Management; • Diploma in Labour Law; • Certificate in Gender Policy Management; • BA Honours in Human Resource Management: • Labour Relations; • Post Higher Education Diploma; • Bachelor of Arts.	• Human Resource Management; • Law; • Mediation; • Arbitration; • Negotiation; • Research.	• Bula Maseve Trading CC (Directorship) • Constructive Employment Relations Services (Directorship) • Sedibeng TVET College (Board membership) • South African Board for People Practices (Professional Affiliation) • The Legal Practice Council (Professional Affiliation)	• Board • REMCO	6 5
Professor T Mavundla	Member	1 Nov 2019	n/a	• B Cur (Nursing & Midwifery); • IPHC Intensive Primary Health Care; • PGDEL (Education Management & Leadership) • M Cur Advanced Psych-Mental Health; • AUDNE Nursing Education; • PhD Mental Health.	• Male Sexual and Reproductive Health; • Psychiatric-Mental Health; • Qualitative Research and Theory Development.	• n/a	• Board • ARIC	5 3

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Dr. M Madikizela	Member	1 Nov 2019	n/a	• BSc Biochemistry; • BSc Hons Biochemistry; • MSc Biochemistry; • PhD Biochemistry; • MBA.	• Bioeconomy, Life Sciences, Technology Management and Commercialization of Public Research Results and Business Management	• n/a	• Board • ARIC	5 5
Professor B Biccard	Member	1 Nov 2022	n/a	• PhD; (UKZN); • FCA(SA); • FFARCSI; • MMedSc; • MBChB.	• Anaesthesiology; • Perioperative outcomes; • Global Surgery.		• Board • R&D	4 1
Professor B Chiliza	Deputy Chairperson	1 Nov 2022	n/a	• PhD, Stellenbosch University, 2015; • Fellow of the College of Psychiatrists of South Africa (FC Psych), 2003; • Bachelor of Medicine and Bachelor of Surgery (MB ChB) University of Natal, 1997.	• Psychiatry; • Psychosis; • Clinical psycho-pharmacology; • Health services research; • Psych epidemiology;	• South African Society of Psychiatrists	• Board • REMCO • EXCO	6 5 3

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Ms. D Dondur CA(SA) CD(SA)	Member	1 Nov 2022	n/a	• Masters in Business Administration; • Honours in Business Administration; • Honours in Accounting; • Bachelors in Accounting; • International Executive Development Programs; • Certificate in Labour Relations; • Chartered Accountant (South Africa); • Chartered Director (South Africa).	• Auditing; • Finance and Accounting; • Combined Assurance and Enterprise Risk Management; • Corporate Governance; • Strategy; • Human Resources and Labour Relations.	• PPS Holdings Trust • PPS Insurance Company • PPS Retirement Annuity Fund • PPS Beneficiaries Trust • South African Institute of Professional Accountants (SAIPA) • Tshikululu Social Investments NPC • Vaal Orange Catchment management Agency (VOCMA) • Doris Dondur Consulting CC (Dormant)	• Board • ARIC • EXCO	6 7 3
Professor Z Makatini	Member	1 Nov 2022	n/a	• BSc (Hons) Univ London (Kings College); • MSc Immunology (Univ of London LSTM&H); MBChB (Univ Sheffield), FC Path Viro (CMSA); PhD Virology (SMU); Dip Travel Med (Univ of Glasgow); • DTM&H (Wits); • Dip HIV in Workplace (Stellenbosch Univ).	• Clinical virology and immunology with focus on HIV and clinical trials.	• n/a	• Board • REMCO	6 4

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Professor L R Mathivha	Member	1 Nov 2022	n/a	• FCPaed – Critical Care Medicine; • Post Graduate Diploma in Health Sciences Education; • Diploma in Business Administration; • MBChB; • USMLE 1 & 2 • Course in Mediation in Medical Negligence.	• Critical Care Medicine (Adult & Pediatric); • Fellowship Programme Director • Organizational skills in ICU setting and HR Capacitation; • Principal Investigator in multi-national RCT trials; • Scientific Advisory Committee work (National and International); • Enabling work and research environment; • Utilization of resources in a constrained environment.	• n/a	• Board • R&D	6 2

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Professor M Moshabela	Member	1 Nov 2022	Sept 2023	• PhD, Public Health (2012) • MSc, Field of Study: Demography and Health (2017) • Masters in Family Medicine (2009) • MBChB (2001) • Diploma: HIV (SA), (2006)	• Public Health; • Implementation Science; • Health Systems.	• National Research Foundation – NRF (Independent Board Chairperson) • Africa Health Research Institute – AHRI (Director – UKZN) • Centre for AIDS Programme of Research in South Africa – CAPRISA (Director – UKZN) • KZN Centre for Radio Astronomy, Economic Advancement, Technology and Entrepreneurship – KREATE (Director – UKZN) • Sugar Milling Research Institute – SMRI (Alternate Director – UKZN)	• Board • R&D	2 1

NAME	DESIGNATION	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES OR TASK TEAMS	NO. OF MEETINGS ATTENDED
Professor T Naledi	Member	1 Nov 2022	n/a	• FCPHM(SA); • MBChB.	• Translation of research into policy and practice; Health Equity, Social and Structural Determinants of Health, Youth and adolescent Health; HIV Prevention.	• Children's Institute • SHAWCO • Global Brain Health Institute • Global Brain Health Institute Governing Board Member (University of California, San Francisco (UCSF) and Trinity College Dublin (Trinity) • Africa Centre for HIV/ AIDS Management (Advisory Board Chair) • Council for Public Health Medicine (South Africa) • Tekano (Founding Board Chairperson) • Perinatal Mental Health Project (Board of Advisors)	• Board • ARIC	4 6
Professor T Pillay	Member	1 Nov 2022	n/a	• PhD (Cantab); • FRCPath (London); • FCPath (SA); • MBChB cum laude.	• Molecular & cellular biology; • Expression cloning of proteins; • Single domain antibodies (nanobodies); • Assay of glycated proteins • Molecular modelling of ligands and receptors.	• n/a	• Board • R&D	5 1

COMMITTEES

Committee	No of meetings held	No of Members	Name of Members
Board	5	16	Professor J Mahlangu
			Professor T Tucker
			Professor R Carolissen
			Adv. D Khosa
			Professor T Mavundla
			Dr. M Madikizela
			Professor E Seekoe
			Professor E Mukwevho
			Ms. D Dondur CA(SA)
			Professor T Naledi
			Professor B Chiliza
			Professor Z Makatini
			Professor L R Mathivha
			Professor B Biccard
			Professor M Moshabela
			Professor T Pillay
ARIC	7	7	Ms. D Dondur CA(SA)
			Professor T Naledi
			Dr. M Madikizela
			Professor T Mavundla
			Professor E Mukwevho
			Ms. J Williams CA (SA)
			Mr. J Watson CA (SA)
HR & REMCO	5	5	Professor T Tucker
			Professor R Carolissen
			Adv. D Khosa
			Professor B Chiliza
			Professor Z Makatini
R&D	2	5	Professor E Seekoe
			Professor L R Mathivha
			Professor B Biccard
			Professor M Moshabela
			Professor T Pillay
EXCO	3	6	Professor J Mahlangu
			Professor E Seekoe
			Professor T Tucker
			Ms. D Dondur
			Adv. D Khosa
			Professor B Chiliza

Remuneration of Board members

Remuneration of Board members is based on the daily remuneration rate prescribed by National Treasury, as amended from time to time.

- Board and committee members receive a meeting fee for attending meetings of the SAMRC Board and Board committees, as well as meetings members are invited to attend to represent the SAMRC Board in an official capacity. The Meeting Fee to be equivalent to the daily remuneration rate prescribed by National Treasury, as amended from time to time.
- Board and committee members receive a meeting allowance in addition to the daily meeting fee as compensation for time spent preparing for meetings, travelling, unavoidable stayovers, follow-up activities relating to meetings etc. The daily meeting allowance is equivalent to the daily meeting fee prescribed by National Treasury, as amended annually.
- Board members are allowed to receive a data allowance equivalent to the allowance payable to executive managers of the SAMRC, as amended from time to time. The data allowance is currently R307 per month.
- The Board Chairperson receives a cell phone allowance of R700 per month.
- Employees of the State are not remunerated for serving on the SAMRC Board. There are currently no employees of the State serving on the SAMRC Board.
- The Board reviews annually the dispensation for remunerating Board members. The last review was conducted at the Board meeting held on 31 July 2023.

The SAMRC pays all travel costs related to Board members' attendance at Board meetings and Board Committee meetings.

- Board members make use of economy class on air travel.
- The amount for overnight accommodation and breakfast is in accordance with the amount prescribed by National Treasury, as amended from time to time.
- If required, class A or B car rental is provided.
- Shuttle services is provided only for travel to and from the airport, hotel and meeting venue.
- Members are responsible for their own transportation to and from local meeting venues. Reimbursement for the use of a member's own vehicle for travelling to a local meeting or official event is in accordance with the rate prescribed by National Treasury, as amended from time to time.

The amount of remuneration paid to each board member is as follows.

Name	Remuneration	Other allowance *(Data & Cellphone)*	Other re-imbursements *(Mileage, Toll fees & Parking)*	Total
Prof. J Mahlangu	146,718	12,084	0	158,802
Prof. T Tucker	152,722	3,684	0	156,406
Prof. R Carolissen	78,242	3,684	0	81,926
Adv. D Khosa	107,920	3,684	268	111,872
Prof. T Mavundla	62,054	3,684	0	65,738
Dr. M Madikizela	78,242	3,684	0	81,926
Prof. E Seekoe	112,860	3,684	0	116,544
Prof. E Mukwevho	102,524	3,684	5,743	111,951
Ms. D Dondur CA(SA)	162,868	3,684	0	166,552
Prof. T Naledi	70,148	3,684	0	73,832
Prof. B Chiliza	113,316	3,684	0	117,000
Prof. Z Makatini	99,826	3,684	0	103,510
Prof. L Mathivha	62,054	3,684	0	65,738
Prof. B Biccard	37,772	3,684	0	41,456
Prof. M Moshabela	24,282	3,684	0	27,966
Prof. T Pillay	51,262	3,684	0	54,946

RISK MANAGEMENT

The Board retains overall responsibility for determining the risk appetite of the SAMRC, assessing significant and emerging risks, and ultimately accountable to ensure that an effective holistic approach to risk management is in place to understand, evaluate and mitigate risk at the SAMRC. It has delegated responsibility to the Audit and Risk and IT Committee (ARIC) for overseeing and reviewing the efficacy of these arrangements and independently monitors the effectiveness of the system of risk management, as well as that of the SAMRC's internal auditors and external auditors. The Board maintains a strong and regular oversight of the various committees' work and receives regular updates on the activities of the ARIC on the organisation's system of risk management and strategic risk mitigation measures, and reports on its review in the SAMRC's Annual Report.

The SAMRC has a comprehensive risk management system designed to identify and assess important emerging and significant risks faced by the organisation. The Enterprise Risk Management (ERM) Unit at SAMRC is a dedicated department that reports directly to the ARIC and has primary responsibility for the design, implementation and monitoring of corporate enterprise-wide risk management across the SAMRC. This has enabled the SAMRC to adopt a common and integrated approach to identifying, assessing and mitigating strategic, research, and other operational risks, which positively contributes to the organisation's overall performance and achievement of the SAMRC's overall vision of building a healthy nation through research, innovation and transformation.

The SAMRC's philosophy to ERM entails the proactive management and mitigation of risks and the exploitation of any related opportunities under the guidance of the SAMRC Board, President and Executive Management. The ERM strategy, policy and framework is subject to annual review, and any amendments are submitted to ARIC for consideration and Board approval. The current governance policies relating to risk management include:

- Risk Management Strategy
- Risk Management Policy and Framework
- Fraud Prevention Policy and Plan
- Combined Assurance Framework Policy
- Code of Business Conduct

Risks & mitigation activities

A key objective of risk management is to ensure that potentially significant risks facing SAMRC and opportunities associated with realising the strategic objectives are identified, proactively assessed, and managed in such a way that their impact is maintained in accordance with the SAMRC's risk appetite.

The SAMRC's significant risks and opportunities are determined through a strategic risk review process where the SAMRC Executive Management and Board assess its impact on the achievement of the strategic objectives, which is updated as and when emerging risks and opportunities are identified. Where appropriate, management action plans to further improve the management of these risks have been developed and are being implemented. Further, major risks that could influence the achievement of SAMRC's strategic objectives are identified throughout the organisation and shared with Executive Management, which are achieved through risk workshops and regular assessments at both strategic and operational. New and emerging risks are actively and continuously identified throughout the organisation and mitigation strategies, where appropriate, are timeously developed and implemented.

The core fraud risks facing the SAMRC as part of the Fraud Prevention Plan Strategy were revisited as part of the annual fraud risk assessment. The

identified controls to mitigate these were evaluated for effectiveness, and where deemed necessary, action plans to further strengthen certain areas were developed to further strengthen the control environment.

Risk dashboards are utilised to report quarterly to the Executive Management Committee and Audit, Risk & IT Committee on the status of implementation of the organisation's risk management plan. These quarterly reports form the basis of the ongoing communication of new and emerging significant risks and the monitoring of the status of the implementation on management action plans. Further support is provided by internal audit in the form of assurance on the effectiveness of control procedures in place to reduce the possibility and outcome of the known risks.

Related risks are aggregated and grouped to determine the significant risk category/context. Selected significant business risks and opportunities (grouped by strategic priorities), together with key mitigating measures, aligned to the strategic focus areas that may impact the SAMRC's ability to achieve its objectives, are listed in the table below.

Strategic priorities	Significant risk category/context	Risk description	Key response measures
Administer health research effectively and efficiently in South Africa	POPIA Compliance	Onerous legislative requirements and complexity of the POPI Act requires further capacitating the user's appreciation and understanding of the relevant legislative requirements	• Policies, guidelines, and manual legislative compliance framework • Dedicated legal compliance staff and appointed Deputy Information Officers
	Corporate process improvements	Further improvement in support functions to assist research units in executing the SAMRC mandate	• Management oversight • Online helpdesk services and technology • Contracts for major procurement spends • Policies, processes, SOPs
	Infrastructure management and revitalisation of Delft site	Infrastructure & equipment management and revitalisation of Delft site to mitigate the deterioration and aging buildings and research assets	• Asset management and verification • Capital project refurbishment • Preventative maintenance plans • Revamping office space
	Data management	Cyberthreats and loss of SAMRC research data/intellectual property	• Firewall protection • Management monitoring and oversight • Policies, processes, SOPs

Strategic priorities	Significant risk category/context	Risk description	Key response measures
Lead the generation of new knowledge	Health, Safety & Environment (HSE)	HSE exposures on premises and community-based research programmes, delays programmes/project and adverse impact on future funding	• Dedicated HSE team • HSE Management System • Emergency Preparedness and Response Procedure
	Maintaining research integrity	The risk involves application of inconsistent data management processes; inadequate structured mentorship and onerous new legislative requirements imposed	• Establish Research Integrity Office • Human and animal ethics committees • Policies, guidelines and SOPs
	Transformation	Progression of staff transformation across the organisation at senior research level impacted by various factors, including due to lack of staff turnover, limited budget and scarce skills shortage in medical science	• EE Strategy & Plan • Strengthened Transformation forum with inclusion of the EE and Skills development Committee • Appointed designated Transformation Executive and Office • Diversity intervention initiatives and leadership programs
	Leadership	Sustained leadership at EMC level	• Development of defined strategies and continually enhancing to strengthen sustained leadership
	Refocus of the Intra-Mural domain	Focusing on current and new emerging/re-emerging epidemics and pandemics. Effect of climate change on health and increased prevalence of NCDs	• Realigned research focus in place
	Funding	Inability to maintain and appropriately diversify incoming funding to generate future funding opportunities	• Dedicated ongoing investigation for further local and international funding opportunities in both the private and public sector
Support, through funding and other mechanisms, technology development and implementation, and innovations in health and technology delivery to improve health	Lack of further development and commercialization of (a) SAMRC-owned and (b) SAMRC-funded innovations	Limited funding for/value proposition of the innovation reducing interest from industry to commercialize or target market to implement the innovation	• IP and Commercialization Policy, Strategy and Procedures • External partnering to pursue commercialisation opportunities

Strategic priorities	Significant risk category/context	Risk description	Key response measures
Build human capacity for the long-term sustainability of the South African health research	Limited research capacity in scarce skills	Limited scarce skills capacity requires further development of research scientists to assist in growing the pool of South African HDI medical research scientist	• Capacity building strategy for supporting the development of HDI research scientist
	Funding scientific excellence and innovation	Risk of a poor oversight of the scientific review, i.e. project owners not understanding the science	• Implemented a quality review process for all externally funded projects • Scientific advisory committees established
Translate new knowledge into policies and practices to improve health	Ensuring knowledge translation	The risk of funding invested in interventions not progressing into the next phase of development/ translation leading to missed opportunities to impact nation's health/sub-optimally designed studies not meeting key stakeholder requirements	• SAMRC strategic and business plans in place

INTERNAL CONTROL UNIT

The SAMRC has a comprehensive risk management and internal control system in place. The system is designed to identify and appropriately mitigate the emerging and significant risks of the business and ensure the accuracy and reliability of the SAMRC's financial reporting, while facilitating the delivery and sustainability of the strategic goals.

The Board acknowledges that they are ultimately responsible for the organisation's system of internal financial control and place considerable importance on maintaining a strong control environment. Key features of the SAMRC's financial reporting internal controls include:

- clearly defined delegations of authority and lines of accountability;
- policies and procedures governing financial resource management, financial reporting and key IT projects;
- assurance on key processes and audits as part of the internal audit coverage;
- an annual IT general control assessment conducted by the external auditors on the business applications that support the financial close process; and
- a detailed review by the Audit and Risk and IT Committee (ARIC) and the Board of the financial statements and disclosures within the annual report.

The ARIC is required to ensure that management has adequate controls in place over assets, risk and financial systems, and has systems to allow for timely and accurate financial reporting that complies with all applicable requirements and legislation. The ARIC therefore plays a key role in the assurance process and effectiveness of the risk management process at the SAMRC.

Internal audit and audit committees

The Internal Audit function is a key element of the organisation's internal control. Its role is to provide assurance that the SAMRC's risk management and internal control systems are well designed and operate effectively and that any corrective action is taken promptly. Its audits cover internal controls and risk management processes relating to the financial and operational, as well as IT and compliance activities of the SAMRC. The outsourced Internal Audit function reports functionally to the ARIC and is overseen by the Internal Audit Charter, which sets out the purpose, scope and authority of the Internal Audit function and is reviewed annually. Internal Audit has unrestricted access to the Chairperson of the ARIC and the SAMRC President. The Internal Audit function works closely with the Risk Management function and engages with the external auditors on an ongoing basis.

The work of Internal Audit focuses primarily on areas that present the greatest risk to the SAMRC. This is achieved by following a risk-based assurance approach, focusing on the key risk exposure as approved by the Board. An Internal Audit Plan is prepared annually and set on a three-year rolling basis. Focus areas are determined and updated annually using a risk-based approach considering the risk assessments conducted in the public entity and ensuring the work is appropriately aligned to and coordinated with the activities of other relevant assurance providers. The SAMRC captures and tracks all internal and external audit findings, mitigating actions and responsibilities and is followed up quarterly by Internal Audit. The ARIC receives quarterly reports on progress against the Internal Audit Plan and corrective actions taken by management in response to audit findings.

Based on the results of the planned and adhoc audit activities undertaken during the financial year, it can be concluded that for the performed audit activities the key internal controls were generally effective in all material aspects and reported findings did not expose the SAMRC to significant risk.

The Auditor-General South Africa (AGSA) is responsible for expressing an opinion on the financial statements and to report on findings relating to the audit predetermined objectives, and material non-compliance with specific requirements in the key applicable legislation. The AGSA is invited to all ARIC meetings and receives copies of all relevant papers and meeting minutes.

The table below discloses relevant information on the audit committee members:

Name	Qualifications	Internal or external	If internal, position in the public entity	Date appointed	Date Resigned	No. of Meetings attended
Ms D Dondur CA(SA)	Masters in Business Administration; Honours in Business Administration; Honours in Accounting; Bachelors in Accounting; International Executive Development Programs; Certificate in Labour Relations; Chartered Accountant (South Africa); Chartered Director (South Africa).	External	Board member	1 November 2022	n/a	7
Prof. T Naledi	FCPHM(SA); MBChB.	External	Board member	1 November 2022	n/a	6
Dr. M Madikizela	BSc Biochemistry; BSc Hons Biochemistry; MSc Biochemistry; PhD Biochemistry; MBA.	Internal	Board member	1 November 2019	n/a	5
Prof. E Mukwevho	PhD Anatomy and Cell Biology; MSc Molecular & Cell Biology; BSc Honours Biochemistry; Bachelor of Science; MBA; Certificate in Project Management; Certificate in Financial Management.	External	Board member	1 November 2019	n/a	6
Prof. T Mavundla	B Cur (Nursing & Midwifery); IPHC Intensive Primary Health Care; PGDEL (Education Management & Leadership) M Cur Advanced Psych-Mental Health; AUDNE Nursing Education; PhD Mental Health.	External	Board member	1 November 2019	n/a	3
Ms. J Williams CA(SA)		External	n/a	1 November 2022	n/a	5
Mr. J Watson CA (SA)		External	n/a	1 October 2020	n/a	6

FRAUD AND CORRUPTION

The SAMRC has zero tolerance for unethical business conduct, in particular fraud and corruption and is committed to fighting fraudulent behaviour at all levels of the organisation. The SAMRC Fraud Prevention Policy addresses fraud risk management both proactively and reactively, and the Fraud Prevention Plan developed includes a fraud strategy as one of the outputs of the plan. Internal controls, including our policies and procedures, also play a critical role in fraud mitigation.

A key control within SAMRC is an online whistle-blower hotline where staff can report fraudulent activities/incidents, and knowledge of perceived and alleged irregular or unethical behaviour in a confidential and controlled environment anonymously. The webpage, 'Report fraudulent activities at the SAMRC', is available to all staff via the SAMRC Intranet home page. Staff who have knowledge of an occurrence of fraud or corruption, or who have good reason to suspect that a fraudulent or corrupt act has occurred, have a duty to promptly report any reasonable suspicions. All reported cases are directed to the appropriate governance structures Fraud Prevention Plan and are treated with the utmost confidentiality to protect the rights of both the whistleblower and the alleged party.

Minimising conflict of interest

The SAMRC's commitment to high standards of business conduct and ethics is set out in the SAMRC's values and is supported by the Board approved Code of Business Conduct Framework Policy (Code). In this regard, the SAMRC's commitment to the Code provides a framework of ethical practices and business conduct that are applicable to the Board, employees and external stakeholders, such as suppliers.

The Code is available to all employees on SAMRC's in-house intranet and to external stakeholders on the SAMRC external website. In an event where an employee breaches the provisions of the policy, this will be addressed in terms of the SAMRC's Employment Relations Policy.

Each SAMRC employee is required to declare any interest and potential conflicts of interest on an annual basis via an online declaration of interest system. All outside work, financial and private interest, and any other business activities, including gifts, must be declared when completing the SAMRC staff annual Online Declaration of Interest. Failure to disclose interests, or the wilful provision of incorrect or misleading details can lead to charges of misconduct.

In addition, a code of conduct for Supply Chain Management (SCM) practitioners and other role players is in place, whereby conflicts of interest are declared on an annual basis in addition to the SAMRC-wide annual online declaration process.

Code of conduct

The SAMRC acknowledges that research excellence must be underpinned by the highest standards of ethics and integrity, to ensure that research is reliable and trustworthy. The principles of honesty, scientific rigor, consistency, transparency, and accountability are key to maintaining research integrity and trust in research conducted by the SAMRC researchers and collaborators.

The SAMRC adheres to the minimum national benchmark of norms and standards for conducting responsible and ethical research set by the National Health Research Ethics Council (NHREC) and other applicable laws, regulations, policies, and practices. The SAMRC recognises the importance of the Promotion of Access to Information Act (PAIA) and Protection of Personal Information Act (POPIA). Any information about natural persons is processed in line with the eight conditions of lawful processing of personal information as outlined in Protection of Personal Information Act (POPIA). Furthermore, access to information held by the SAMRC can be accessed in line with the SAMRC PAIA manual which is available on the SAMRC website.

The SAMRC's commitment to research integrity is reflected and embedded in its institutional systems by establishing two Research Ethics Committees

(REC), Human Research Ethics Committee (HREC) and the Animal Research Ethics Committee (ECRA). The SAMRC's research ethics policy requires that all research involving human participants and animals must be submitted for ethics review and approval by HREC and ECRA respectively. In addition, the SAMRC expects researchers involved in animal research to be proactive in pursuing principles of replacement, reduction, refinement, and responsibilities, wherever possible or practical. HREC and ECRA are required to conduct active monitoring of the approved protocols.

The strategy and objective of Research Integrity Office (RIO) are oriented towards prevention and education, and not reactive and punitive approach. Among the preventative and education mechanisms that the SAMRC employs to promote responsible conduct of research is ethics training. The main aims of this training are to influence the virtuous character of individuals and to get researchers to collectively commit to conducting research within the lens of research integrity and ethical standards. In line with the SAMRC value of citizenship, this past financial year the SAMRC shared knowledge from its accredited training programme in applied ethics with its own staff and external institutions, including University of Venda, Northwest University and Durban University of Technology.

As a public entity and an institution that subscribes to openness and objectivity, the SAMRC affords the public an opportunity to report any alleged research misconduct and/or breaches of research norms and standards. As such, the SAMRC invites all stakeholders who have knowledge of the occurrence of a breach of research norms and standards or research misconduct to exercise their moral duties and ethics of responsibility to promptly report any reasonable suspicions.

Health safety and environmental

The SAMRC has a Health, Safety, and Environmental (HSE) Management System to monitor HSE risks, establish clear strategies to achieve HSE goals and formalise statutory and non-statutory structures with defined roles and responsibilities to pursue HSE excellence. The effects of these initiatives at the SAMRC are profound and multifaceted. Firstly, there's the imperative of legal compliance, ensuring adherence to relevant regulations and standards. Secondly, prioritising HSE safeguards employee protection, fostering a safe and healthy work environment. Thirdly, there's a concern for reputational risks; any lapses in HSE practices could tarnish SAMRC's reputation and erode public trust. Lastly, SAMRC recognises its social responsibility to safeguard the health and well-being of the community it serves, reflecting its commitment to broader societal welfare.

Company/Board Secretary

The SAMRC's Board Secretary plays a crucial role in overseeing various aspects of board operations. This includes facilitating both Board and Board Committee meetings, as well as orchestrating the induction process for new Board members. He is responsible for managing processes related to the Board Plan, agenda, meeting documentation, and logistics, ensuring smooth proceedings and operations of the Board. Additionally, he offers guidance during meetings and ensures adherence to proper decision-making protocols, meticulously documenting outcomes. Moreover, he prepares action lists and accurate Board and Board Committee meeting minutes. Acting as a formal conduit of communication, the Board Secretary liaises between the Board and management, as well as with the Executive Authority, particularly on administrative matters. Throughout his duties, the Board Secretary remains committed to acting in the best interests of the SAMRC.

SOCIAL RESPONSIBILITY

The SAMRC has implemented several initiatives aimed at uplifting communities and fostering sustainable development during the 2023/24 financial year.

One of the projects was the Heat-Safe Schools initiative, a pragmatic and sustainable effort to ensure the well-being of school children during hot weather. Recognising the challenges posed by soaring temperatures, SAMRC has undertaken measures such as installing ceilings and fans in classrooms to moderate temperatures, constructing awnings to provide shade during breaks, and setting up foot-operated water fountains closer to where children need them most. These initiatives not only create a conducive learning environment but also promote health and safety among students. This project was implemented in schools in Limpopo and KwaZulu-Natal.

Moreover, SAMRC goes beyond infrastructure projects by actively engaging with youth through its Generation Science "GenS" job-shadowing initiative which was done in partnership with Stellenbosch University and the South African Population Research Infrastructure Network (SAPRIN). Catering to Grade 11 and 12 students interested in science, health, and mathematical fields, GenS provides invaluable opportunities for hands-on experience in careers related to SAMRC's mission. Recently endorsed by the Western Cape Department of Education, this programme has been running since 2022 as part of Youth Month commemoration and to nurture the talent of tomorrow's leaders.

The SAMRC also participated in Mandela Day, a global call to action for individuals and organisations to dedicate 67 minutes to community service in honour of Nelson Mandela's legacy. SAMRC staff contributed to this noble cause by donating "jars of hope" filled with ingredients for soup, which were distributed to communities surrounding SAMRC campuses. This act of kindness symbolises SAMRC's dedication to alleviating food insecurity and promoting solidarity within communities.

Heat-safe schools initiative.

Learners getting practical experience in the labs as part of Generation Science programme.

Jars of Hope – Mandela Day initiative.


Diabetes Awareness fun walk and public engagement initiative.

On World Diabetes Day, staff visited Ikhayalabantu, a grassroots care home that provides residential care to frail and/or disabled persons in Langa to share information on how to make achievable healthier lifestyle choices.

SAMRC exhibition at the AIDS conference in Durban, where delegates were able to have their photograph taken with life-sized cut out props of our leaders in the field of HIV and AIDS.

Generation Science Job Shadowing, Youth Month initiative.

B-BBEE COMPLIANCE PERFORMANCE INFORMATION

The following table has been completed in accordance with the compliance to the B-BBEE requirements of the B-BBEE Act of 2013 and as determined by the Department of Trade, Industry and Competition.

Has the Department/Public Entity applied any relevant Code of Good Practice (B-BBEE Certificate Levels 1 – 8) with regards to the following:		
Criteria	**Response Yes/No**	**Discussion** *(include a discussion on your response and indicate what measures have been taken to comply)*
Determining qualification criteria for the issuing of licences, concessions or other authorisations in respect of economic activity in terms of any law?	No	Not Applicable
Developing and implementing a preferential procurement policy?	Yes	SAMRC complies with the Preferential Procurement Regulations of 2022
Determining qualification criteria for the sale of state-owned enterprises?	No	Not Applicable
Developing criteria for entering into partnerships with the private sector?	No	Any public private partnerships (PPP) that SAMRC may enter into will be in line with the Treasury Regulations. However, SAMRC receives some funding from the private sector, and these funds do not constitute PPP
Determining criteria for the awarding of incentives, grants and investment schemes in support of Broad-Based Black Economic Empowerment?	No	However, two of the indicators of Programme 4 address the issue of capacitating black/historically disadvantaged individuals

B-BBEE CERTIFICATE

NTSIKELELO
VERIFICATION AGENCY

Company Address: Unit 3 and 4B Pinevalley Junction, 81 Stapleton Road, Pinetown 3610
Registration Number: 2012/221535/07
VAT Number: 4460287826
TEL : 031 701 5289

B-BBEE Verification Generic Certificate
SOUTH AFRICAN MEDICAL RESEARCH COUNCIL
Registration Number:Schedule 3A, Public Entity : VAT Number:4890103718 Address: Medicina Campus,Francie Van Zyl Drive, Parrow, 7500

Legally assured verification

THE SCORE OBTAINED COMPRISES THE FOLLOWING:

Element	Actual Score	Target Score
Management Control	11.45	20
Skills Development	15.20	25
Enterprise and Supplier Development	43.37	50
Socio Economic Development	05.00	05
Total Points	75.02	100

B-BEE CONTRIBUTOR STATUS LEVEL: LEVEL 5
B-BEE PROCUREMENT RECOGNITION LEVEL: 80%

Scorecard Sector	DTI Generic Codes of Good Practice - Specialized of B-BBEE Act (Act53 of 2003) as amended on 11October 2013- Generic (Gazette No: 36928 and 42496)
Financial Period Measured	1 April 2022 to-31 March 2023
Enhanced Recognition Level	NO
Discounting Principle applied	NO
Modified Flow Through Applied	NO
Exclusion Principle applied	NO
Empowering Supplier	YES
Designed Group Supplier	NO
Black New Entrant	0%
Black Ownership	0%
Black Women Ownership	0%
Participated in Y.E.S	NO
Y.E.S Enhancement Level	N/A
Verification Number	1 NVA G10 REV 0
Technical Signatory	Sibongile Mahlangu

Designated Group Ownership	0.00%
Black Disabled Ownership	0.00%
Black Military Veterans	0.00%
OwnershipProcurement	0.00%
Recognition	0.00%
Black People Living in Rural Areas	0.00%
Black Unemployed	NO
Achieved Y.E.S Target & 2.5% Absorption	NO
Achieved 1.5 x Y.E.S Target & 5% Absorption	NO
Achieved 2 x Y.E.S Target & 5% Absorption	NO
Initial Issue Date:	31 August 2023
Revision Date:	N/A
Expired Date:	30 August 2024

Signature:

sanas
BVA294

This certificate is valid for 12 months from the original date of issue.

1NVA.COR.21.2a 16/12/2022 Page1 of 1

HUMAN RESOURCES MANAGEMENT

INTRODUCTION

The SAMRC is committed to delivering impactful scientific research and development through its people. The goal is to support existing and new research areas, initiatives, and capacity building in the field of health research and innovation, in line with the SAMRC mandate and to serve as a national asset.

To optimise human resources capability and overcome current and future challenges within the SAMRC, the SAMRC's human capital-enhancing Human Resource (HR) strategy becomes imperative. This strategy includes the continuous assessment and consideration of external environmental trends and the potential impact on HR matters.

During the year under review, the increased requirements for health research were considered, which was further compounded by the economic challenges that our country faced with the anticipated impact on international investment and the labour market. Consideration was therefore given to budget constraints with the potential refocus of priorities, together with the dormant impact on the retention of scarce and critical skills due to the potential pool of available talent that could shrink.

The cost-of-living and high inflation, amongst others, required further consideration of remuneration and benefit packages that could be under strain to meet skills attraction and retention requirements, while considering group schemes to assist employees with affordable benefits.

Further environmental realities and opportunities that were considered include the rapid advancement in technology with the Fourth Industrial Revolution (4IR) and the impact of the Fifth Industrial Revolution (5IR) on the world of work. This includes the readiness and adoption of Artificial Intelligence (AI) and how it could affect efficiency and strategic priorities. It requires continuous exploration of digitalisation in the workplace, the readiness of the SAMRC to operate beyond the 21st century, and the impact on alternative ways of working. It has been important for the organisation to consider the required deskilling, reskilling, and upskilling initiatives to remain competitive and an employer of choice.

The focus was ultimately to overcome these challenges and deliver impactful results through our talent that would benefit our nation.

HR priorities and the impact of these priorities, while highlighting achievements:

With this context and challenges in mind, the HR strategy demanded a concentrated effort on specific priorities to attain the organisational objectives. One such priority was the development and implementation of a comprehensive e-HR strategy to optimise technology and automate processes. This involved a thorough analysis of potential gaps in HR systems, technology, and reporting, as well as the overall HR analytics maturity within the organisation. The definitive role of advanced people analytics is appreciated and has been prioritised as it adds significant value by enabling data-driven decision-making to deliver on the integrated talent management strategy. The e-HR strategy includes a strategic roadmap based on the assessments made to further guide efforts to allocate resources, set priorities, and plan strategies to improve.

Capacity building, including learning and development, remains a priority for the SAMRC as various strategies and tools are enhanced or introduced. This includes the study support of formal qualifications and programmes. It further includes a customised approach to leadership development to provide SAMRC leadership with the necessary tools and skills towards greater effectiveness as managers of people, a particular skill set to ensure high-performing teams. Senior leaders are further equipped with the tools necessary to address the challenges of the 21st-century world of work. The approach nurtures a strategic mindset, as participants explore concepts around strategic innovation, sustainability, and collaboration, organisational change, business agility, and financial viability; all in line with the strategic objectives and challenges of the SAMRC. These structured programmes were complemented with coaching initiatives as needed, in an attempt to offer bespoke solutions and support.

Capacity building was further underpinned by the need to review and update the SAMRC's competency framework. This competency framework defines the blueprint for 'excellent' performance within the organisation. It is the library that holds and organises the descriptions of behaviours applicable at all levels for all job functions, while recognising that it is only successful in supporting decision-making if it accurately reflects the needs of both the job and the SAMRC in terms of skills, experience, and behaviours. Moreover, the review and update of the competency framework created an opportunity to reflect on the alignment of capacity-building practices with the ethos, values, and desired organisational culture.

The reviewed and updated SAMRC competency framework further guides the medium and long-term talent management needs for the allocation of budget and resources. In addition to the budget allocated for capacity building, resources were complemented by capitalising on the SETA Discretionary Grant that was awarded after successfully submitting the SAMRC Work Skills Plan (WSP) and Annual Training Report (ATR).

Initiatives are continuously explored to create awareness and provide opportunities for developing the skills and competencies of SAMRC employees. To this end, webinars have been successfully introduced as an online platform for continuous learning and engagement. These webinars, which can be attended voluntarily over lunchtime, address areas of improvement towards the desired organisational culture, drive and support change management initiatives, as well as the socialisation of policies.

The SAMRC appreciates that building community takes a thoughtful journey of continuous engagement and active participation of all employees. Extensive time was spent on the process of sharing and unpacking the survey narrative, while the co-creation of the initiatives and actions for change continued during the reporting period. While common themes were identified across the organisation, the process enabled a tailored approach and strategies to support the unique experiences, context, and complexities in our environment. This will further assist with the continuous review, monitoring and evaluation of initiatives and success indicators.

Workforce planning and key strategies to attract and retain a skilled and capable workforce:

The success of the HR strategy is highly dependent on the people/workforce planning as a structured approach to strategically manage talent in alignment with the SAMRC's objectives. After conducting a thorough evaluation to address the talent challenges and progress that has been made concerning diversity within the organisation, it has been identified that there is still a challenge to achieve equity at the senior management level. To address this, succession planning has been prioritised as a critical step to develop and ensure a diverse leadership pipeline. Additionally, deputy directors have been appointed to serve as a vital level of leadership in the organisation. Furthermore, a structured capacity development programme has been designed to enhance the potential and capacity of participants to take up senior leadership roles when they become available. This programme also aims to address the overall transformation agenda within the organisation.

Employee performance management:

The SAMRC reviewed and updated the performance management approach to include a philosophy of engagement. The term engagement in a knowledge-based organisation acknowledges the self-directed nature of the SAMRC careers, while aligning the individual and organisational values to ensure commitment and discretionary effort. A philosophy of engagement further promotes employee ownership of, and control over, the process.

Employee wellness programmes:

A holistic and proactive approach to employee wellness recognises the benefits of promoting a healthy and productive work environment, while enabling the desired organisational culture. A variety of wellness initiatives are offered to support the physical, mental, and emotional well-being of employees. This includes a range of offerings such as a toll-free 24-hour counselling service available to employees and their family members living with them; together with education and awareness tools

and resources such as access to a mobile platform, and weekly and monthly topical talks being hosted by experts in the topical fields. In addition, lunchtime fitness sessions are available and annual wellness days with several health tests are on offer.

Policy development:

The continuous monitoring and regular review of SAMRC policies and procedures are critical to ensure alignment with changes in labour legislation and the overall regulatory environment. During the year under the review, policies including the: Remuneration Policy, Performance Engagement Policy, Leave Policy, and subsequently, the Conditions of Service were reviewed and updated. In addition, the Board approved that the Mandatory Vaccination Policy be retired, with an option to re-implement it at short notice if required.

Future HR plans/goals:

The implementation and sustainability of some key strategies as updated and developed during the year of review are the immediate goals and are prioritised for the next performance cycle and financial year.

The e-HR strategy requires a staggered approach to implementation, with clear short- and medium-term goals, while appreciating the importance of effective change management processes for ease and effectiveness.

The optimisation of the competency framework has been prioritised to continuously improve capacity development by ensuring that all employees have the expertise and sufficient capabilities to perform the work required of them; reducing the skills and knowledge gaps; and allowing a proactive approach to planning for growth, succession, or effective expansion.

The successful implementation and continuous monitoring of the structured leadership capacity development programme to develop the senior leadership pipeline is another priority and is eagerly anticipated.

HUMAN RESOURCE OVERSIGHT STATISTICS

PERSONNEL RELATED EXPENDITURE

Personnel Cost by programme/activity/objective

PROGRAMME/ ACTIVITY/OBJECTIVE	TOTAL EXPENDITURE FOR THE ENTITY	PERSONNEL EXPENDITURE	PERSONNEL EXP. AS A % OF TOTAL EXP.	NO. OF EMPLOYEES	AVERAGE PERSONNEL COST PER EMPLOYEE
Programme 1: Administration	R274,556,985.00	R105,847,292.66	7.3	232	R456,238.33
Programme 2: Core Research	R779,329,419.00	R357,731,618.32	24.68	931	R384,244.49
Programme 3: Innovation and Technology	R326,667,683.00	R71,476,802.96	4.93	180	R397,093.35
Programme 4: Capacity Development	R68,916,043.00	R4,481,617.95	0.31	12	R373,468.16
Programme 5: Research Translation	R0.00	R0.00	0.00	0	R0.00
TOTAL	**R1,449,470,130.00**	**R539,537,331.89**	**37.22**	**1,355**	**R398,182.53**

Personnel cost by salary band

LEVEL	PERSONNEL EXPENDITURE	% OF PERSONNEL EXP. TO TOTAL PERSONNEL COST	NO. OF EMPLOYEES	AVERAGE PERSONNEL COST PER EMPLOYEE
Top Management	R21,276,343.44	4.55	9	R2,364,038.16
Senior Management	R84,448,796.66	18.06	57	R1,481,557.84
Professional qualified	R203,049,538.46	43.44	234	R867,733.07
Skilled	R124,560,337.62	26.65	313	R397,956.35
Semi-skilled	R29,031,462.67	6.21	140	R207,367.59
Unskilled	R5,084,661.46	1.09	41	R124,016.13
TOTAL	**R467,451,140.31**	**100.00**	**794**	**R588,729.40**

Personnel cost for Personnel expenditure for Postdocs, Interns, European and Developing Countries Clinical Trials Partnership (EDCTP) and Post retirement contracts

FUNCTION/AREA/STATUS	PERSONNEL EXPENDITURE	% OF PERSONNEL EXP. TO TOTAL PERSONNEL COST	NO. OF EMPLOYEES	AVERAGE PERSONNEL COST PER EMPLOYEE
EDCTP	R9,166,288.67	26.60	7	R1,309,469.81
Post Doctoral Fellowship	R10,641,605.82	30.88	33	R322,472.90
Post Retirement	R11,202,543.88	32.50	11	R1,018,413.08
Interns	R3,455,182.95	10.02	23	R150,225.35
TOTAL	**R34,465,621.32**	**100.00**	**74**	**R465,751.64**

Personnel cost for Temporary employees

LEVEL	PERSONNEL EXPENDITURE	% OF PERSONNEL EXP. TO TOTAL PERSONNEL COST	NO. OF EMPLOYEES	AVERAGE PERSONNEL COST PER EMPLOYEE
Temporary Employees	**R31,256,438.30**	**100.00**	**487**	**R64,181.60**

Performance Rewards

PROGRAMME/ ACTIVITY/OBJECTIVE	PERFORMANCE REWARDS	PERSONNEL EXPENDITURE	% OF PERSONNEL EXP. TO TOTAL PERSONNEL COST
Top Management	8	R457,266.72	0.10
Senior Management	43	R1,239,961.87	0.26
Professional qualified	157	R2,706,015.99	0.58
Skilled	203	R1,597,283.48	0.34
Semi-skilled	72	R296,563.35	0.06
Unskilled	29	R67,040.56	0.01
TOTAL	**512**	**R6,364,131.97**	**1.35**

Training Costs (including Personnel Costs by Salary band, Post-Doctoral Fellowships, and Interns)

PROGRAMME/ ACTIVITY/OBJECTIVE	PERSONNEL EXPENDITURE	TRAINING EXPENDITURE	TRAINING EXPENDITURE AS A % OF PERSONNEL COST	NO. OF EMPLOYEES TRAINED	AVERAGE TRAINING COST PER EMPLOYEE
Learning and Development Initiatives, including: • Study Support (bursaries) • Leadership Development and Coaching • General Training (Technical and Behavioural Competencies) incl. Health and Safety training	R483 698,854.38	R4 088,615.15	0.85	353	R11 582.48

Employment and vacancies

PROGRAMME/ ACTIVITY/OBJECTIVE	2022/2023 NO. OF EMPLOYEES	2023/2024 APPROVED POSTS	2023/2024 NO. OF EMPLOYEES	2023/2024 VACANCIES	% OF VACANCIES
Top Management	8	8	8	0	0
Senior Management	52	57	52	5	8.8
Professional qualified	207	218	209	9	4.1
Skilled	289	281	278	3	1.1
Semi-skilled	126	121	119	2	1.7
Unskilled	36	40	36	4	10.0
TOTAL	**718**	**725**	**702**	**23**	**3.2**

Note: The table above excludes postdocs, interns, post retirees and EDCTP.

All Deputy Director positions were filled from the internal talent pool as part of an important effort to develop the SAMRC's senior leadership pipeline. Furthermore, a structured capacity development programme has been designed to enhance the skills and potential of internal employees, enabling them to take on senior leadership roles when opportunities arise.

When a vacancy arises, the relevant manager uses the opportunity to analyse the position to ascertain if there is still a need for such a position, or if any restructuring of the role is required. At a minimum, vacancies have remained unfilled for a month.

Employment changes

SALARY BAND	EMPLOYMENT AT THE BEGINNING OF THE PERIOD	APPOINTMENTS	TERMINATIONS	EMPLOYMENT AT END OF THE PERIOD
Top Management	8	1	1	8
Senior Management	53	4	5	52
Professional qualified	205	24	20	209
Skilled	274	33	29	278
Semi-skilled	120	20	21	119
Unskilled	36	4	4	36
TOTAL	**696**	**86**	**80**	**702**

*Note: The table above excludes postdocs, interns, post retirees and EDCTP. Employment at beginning of period *, excludes appointments with a start date of 1 April 2023 and the terminations * exclude the employees with a termination date of the 31 March 2024.*

Reasons for staff leaving

REASON	NUMBER	% OF TOTAL NO. OF STAFF LEAVING
Death	3	4
Resignation	39	49
Dismissal	1	1
Retirement	9	11
Ill health	4	5
Expiry of contract	24	30
TOTAL	**80**	**100**

Note: The table above excludes postdocs, interns, post retirees and EDCTP.

Based on the exit interviews conducted, employees have resigned due to varied reasons such as lack of career advancement opportunities; the quality of supervision; unsatisfactory compensation; the nature of the work; and family circumstances. Where there is still a need for the position, the job will be advertised in accordance with the Recruitment and Selection Policy of the SAMRC.

Labour Relations: Misconduct and Disciplinary Action

NATURE OF DISCIPLINARY ACTION	NUMBER
Verbal Warning	0
Written Warning	1
Final Written warning	2
Dismissal	1

Equity Target and Employment Equity Status

It is important to note that the Employment Equity (EE) targets are in line with the EE reporting period from 01 October 2023 to 30 September 2024. These targets are continuously monitored to intervene and minimise variances. The development and implementation of the bespoke leadership development programme to equip SAMRC leaders and develop a pipeline for senior leaders in the organisation, is a key strategy to address the challenges identified at senior management level.

LEVELS	MALE							
	AFRICAN		COLOURED		INDIAN		WHITE	
	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET
Top Management	3	3	0	1	0	0	0	0
Senior Management	3	13	7	7	3	1	7	6
Professional qualified	21	37	11	11	6	6	4	7
Skilled	49	92	21	20	8	6	1	12
Semi-skilled	41	61	10	7	1	2	0	6
Unskilled	8	10	2	2	0	1	0	1
TOTAL	**125**	**216**	**51**	**48**	**18**	**16**	**12**	**32**

Note: The above total excludes the foreign nationals as of March 2024: Total Males – 12 as well as Postdocs, Interns, post retirees and EDCTP, however they were considered when opportunities were identified when setting the target in line with EE reporting principles.

LEVELS	FEMALE							
	AFRICAN		COLOURED		INDIAN		WHITE	
	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET
Top Management	1	1	2	2	0	0	2	1
Senior Management	5	14	6	5	5	4	10	11
Professional qualified	54	69	40	34	29	23	27	19
Skilled	130	113	41	41	21	11	6	11
Semi-skilled	50	51	14	6	2	2	1	5
Unskilled	16	16	10	10	0	0	0	0
TOTAL	**256**	**264**	**113**	**98**	**57**	**40**	**46**	**47**

Note: The above totals exclude the foreign nationals as of March 2024: Total Females – 12 as well as Postdocs, Interns, post retirees and EDCTP, however they were considered when opportunities were identified when setting the target in line with EE reporting principles.

LEVELS	DISABLED STAFF			
	MALE		FEMALE	
	CURRENT	TARGET	CURRENT	TARGET
Top Management	0	0	0	0
Senior Management	3	3	0	0
Professional qualified	0	0	3	3
Skilled	1	1	1	1
Semi-skilled	0	0	3	3
Unskilled	0	0	0	0
TOTAL	**4**	**4**	**7**	**7**

PFMA COMPLIANCE REPORT

IRREGULAR, FRUITLESS AND WASTEFUL EXPENDITURE AND MATERIAL LOSSES

Irregular expenditure

a) Reconciliation of irregular expenditure

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Opening balance	R'000	R'000
Adjustment to opening balance	0.00	0.00
Opening balance as restated	0.00	0.00
Add: Irregular expenditure confirmed	0.00	0.00
Less: Irregular expenditure condoned	0.00	0.00
Less: Irregular expenditure not condoned and removed	0.00	0.00
Less: Irregular expenditure recoverable	0.00	0.00
Less: Irregular expenditure not recoverable and written off	0.00	0.00
Closing balance	**0.00**	**0.00**

Reconciling notes

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Irregular expenditure that was under assessment	0.00	0.00
Irregular expenditure that relates to the prior year and identified in the current year	0.00	0.00
Irregular expenditure for the current year	0.00	0.00
TOTAL	**0.00**	**0.00**

b) Details of irregular expenditure (under assessment, determination, and investigation

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Irregular expenditure under assessment	0.00	0.00
Irregular expenditure under determination	0.00	0.00
Irregular expenditure under investigation	0.00	0.00
TOTAL	**0.00**	**0.00**

c) Details of irregular expenditure condoned

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Irregular expenditure condoned	0.00	0.00
TOTAL	**0.00**	**0.00**

d) Details of irregular expenditure removed – (not condoned)

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Irregular expenditure NOT condoned and removed	0.00	0.00
TOTAL	**0.00**	**0.00**

e) Details of irregular expenditure recoverable

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Irregular expenditure recoverable	0.00	0.00
TOTAL	**0.00**	**0.00**

f) Details of current and previous year irregular expenditure written off (irrecoverable)

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Irregular expenditure written off	0.00	0.00
TOTAL	**0.00**	**0.00**

Additional disclosure relating to Inter-Institutional Arrangements

g) Details of non-compliance cases where an institution is involved in an inter-institutional arrangement (where such institution *is not* responsible for the non-compliance)

DESCRIPTION
N/A
N/A
N/A
N/A
TOTAL

h) Details of irregular expenditure where an institution is involved in an inter-institutional arrangement (where such institution *is* responsible for the non-compliance)[4]

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
N/A		
N/A		
N/A		
N/A		
TOTAL		

i) Details of disciplinary or criminal steps taken as a result of irregular expenditure

DESCRIPTION
N/A
N/A
N/A

There were no disciplinary or criminal steps taken for 2022/2023 and 2023/2024 due to no IE.

Fruitless and wasteful expenditure

a) Reconciliation of fruitless and wasteful expenditure

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Opening balance	0	0
Adjustment to opening balance	0	0
Opening balance as restated	0	0
Add: Fruitless and wasteful expenditure confirmed	1	0
Less: Fruitless and wasteful expenditure recoverable[5]	(1)	0
Less: Fruitless and wasteful expenditure not recoverable and written off	0	0
Closing balance	**0**	**0**

Reconciling notes

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Fruitless and wasteful expenditure that was under assessment	0	0
Fruitless and wasteful expenditure that relates to the prior year and identified in the current year	0	0
Fruitless and wasteful expenditure for the current year	0	0
TOTAL	**0**	**0**

b) Details of fruitless and wasteful expenditure (under assessment, determination, and investigation)

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Fruitless and wasteful expenditure under assessment	0	0
Fruitless and wasteful expenditure under determination	0	0
Fruitless and wasteful expenditure under investigation	0	3
TOTAL	**0**	**3**

c) Details of fruitless and wasteful expenditure recoverable

DESCRIPTION	2023/2024	2022/2023
Fruitless and wasteful expenditure recoverable	0	0
TOTAL	**0**	**0**

d) Details of fruitless and wasteful expenditure not recoverable and written off

	2023/2024	2022/2023
DESCRIPTION	R'000	R'000
Fruitless and wasteful expenditure written off	3	0
TOTAL	**3**	**0**

There were no disciplinary or criminal steps taken for the current and previous year.

e) Details of disciplinary or criminal steps taken as a result of fruitless and wasteful expenditure

DISCIPLINARY STEPS TAKEN
There were no disciplinary steps taken

Additional disclosure relating to material losses in terms of PFMA Section 55(2)(b)(i) &(iii))

a) Details of material losses through criminal conduct

No material losses through criminal conduct were incurred during the period ended 31 March 2024.

Late and/or non-payment of suppliers

	NUMBER OF INVOICES	CONSOLIDATED VALUE
DESCRIPTION		R'000
Valid invoices received	14 557	993,745,579.00
Invoices paid **within** 30 days or agreed period		902,397,612.23
Invoices paid **after** 30 days or agreed period		567,324.21
Invoices older than 30 days or agreed period **(unpaid and without dispute)**		0
Invoices older than 30 days or agreed period **(unpaid and in dispute)**		0

SUPPLY CHAIN MANAGEMENT

Procurement by other means

PROJECT DESCRIPTION	NAME OF SUPPLIER	TYPE OF PROCUREMENT BY OTHER MEANS	CONTRACT NUMBER	VALUE OF CONTRACT R'000
Procurement of Conference Venue and Event in Nigeria for the African Rotavirus Network (AfrRN) Symposium	Exclusive Serene Hotel	Single Source	SS6016	10,000,000.00
Procurement of MGI Products and Services	MGI International Sales Co. (Limited)	Sole Source	SS6033	90,000,000.00
Provision of the Research and Innovation Management System (RIMS)	Clarivate Analysts (UK) LTD	Single Source	SS6034	6,800,000.00
Provision of Molecular Reagents	Qiagen (Pty)Ltd	Sole Source	SS6037	9,800,000.00
TOTAL				**116,600,000.00**

Contract variations and expansions

The SAMRC did not have any expansions and variations above 15% for goods/services and 20% for construction-related for the 2023/24 financial year.

OTHER NOTABLE RELATIONSHIPS

National government departments who provide contract/ grant funding to SAMRC

Dept of Science and Innovation
Dept of Social Development

Board members	Term start	Term end	Employed by universities who contract with SAMRC for grant income or collaborative research	Other entities	Board member	Director
Prof. J Mahlangu (Chairperson)	1 November 2019	Current	University of Witwatersrand	None	None	None
Prof. B Biccard	1 November 2022	Current	University of Cape Town	None	None	None
Prof. R Carolissen	1 November 2019	Current	University of Stellenbosch	None	None	None
Prof. B Chiliza	1 November 2022	Current	University of KwaZulu- Natal	None	None	None
Prof. C Dandara	1 November 2022	Current	University of Cape Town	None	None	None
Ms. DT Dondur	1 November 2022	Current	-	None	None	None

Board members	Term start	Term end	Employed by universities who contract with SAMRC for grant income or collaborative research	Other entities	Board member	Director
Adv. D Khosa	1 November 2019	Current	–	None	None	None
Dr. M Madikizela	1 November 2019	Current	University of Pretoria	None	None	None
Prof. Z Makatini	1 November 2022	Current	University of Witwatersrand	None	None	None
Prof. LR Mathivha	1 November 2022	Current	University of Witwatersrand	None	None	None
Prof. T Mavundla	1 November 2019	Current	University of South Africa	None	None	None
Prof. M Moshabela	1 November 2022	31 August 2023	University of KwaZulu-Natal	Africa Health Research Insitute	√	None
				CAPRISA	√	None
				National Health Ressearch Foundation	√	None
Prof. E Mukwevho	1 November 2019	Current	North West University	None	None	None
Associate Prof. T Naledi	1 November 2022	Current	University of Cape Town	None	None	None
Prof. T Pillay	1 November 2022	Current	University of Pretoria	None	None	None
Prof. WID Rae	1 November 2016	31 October 2022	–	None	None	None
Prof. E Seekoe	1 November 2019	31 October 2022	University of Fort Hare	None	None	None
Prof. B Shaw	1 November 2016	31 October 2022	–	None	None	None
Prof. L Skaal	1 November 2016	31 October 2022	University of Limpopo	Public Health Association of South Africa	None	√
Prof. T Sodi	1 November 2016	31 October 2022	University of Limpopo	None	None	None
Dr. T Tucker	1 November 2019	Current	University of Cape Town	None	None	None
Prof. S Velaphi	1 November 2016	31 October 2022	University of Witwatersrand	None	None	None
Ms. J Williams	1 November 2019	31 October 2022	–	None	None	None
Prof. L Zungu	1 November 2019	31 October 2022	University of South Africa	None	None	None

Executive management

	Position	Entity	Board member	Director	Other
Prof. G Gray	CEO/PRESIDENT	Wits Health Consortium	None	None	Researcher
		National Research Foundation	√	None	None
		Hutchinson Centre Research Insititute of SA	None	√	None
		HPCRISA	None	√	None
		GARDP	√	None	None
Mr. N Buick	Chief Financial Officer	-	None	None	None
Ms. T Bam	Executive Director: Human Capacity Development	-	None	None	None
Prof. A Matthee	Executive Director: Transformation	-	None	None	None
Dr M Mdhluli	Chief Research Operation Officer	-	None	None	None
Prof M Mulder	Executive Director:	The Biologicals and Vaccine Institute of Southern Africa	None	√	None
Adv. M Popo	Legal Counsel	-	None	None	None
Prof. L Zulke	Vice President	-	None	None	None

SAMRC staff members who are directors of suppliers or debtors

Staff member	Entity	Director
Dr. R Maharaj	Lumbombo Spatial Development Initiative 2	√
Mr. P Charls	Tertiary Education and Research Network of South Africa	√ till 31 March 2022

	2024				2023			
	Trade receivables	Trade payables	Deferred income	Commit-ments	Trade receivables	Trade payables	Deferred income	Commit-ments
Dept. of Science and Innovation (DSI)	7 153 574	–	None	None	–	None	192 350 052	None
African Health Research Institute	–	–	None	None	None	1 725 000	–	None
Caprisa	–	–	None	None	624 127	–	–	None
National Research Foundation	–	4 721 375	None	None	–	1 340 000	3 288 920	None
North West University	–	–	None	None	None	722 615	–	None
Public Health Association of South Africa	–	–	None	None	–	–	748 108	None
Tertiary Education and Research Network of South Africa	–	–	None	None	–	–	–	None
University of Cape Town	2 683 206	8 126 134	None	None	394 892	18 600 911	395 073	None
UCT Lung Institute	–	–	None	None	None	373 842	0	None
University of Limpopo	–	–	None	None	None	None	None	None
University of Pretoria	–	–	None	None	–	3 156 467	None	None
University of Stellenbosch	831 319	3 400 608	None	None	1 089 271	1 803 583	–	None
University of South Africa	–	1 721 470	None	None	–	–	–	None
WITS Health Consortium	–	4 232 204	None	None	679 871	15 883 304	–	None
Lubombo Spatial develop	172 082		None	None	–	–	–	None
GARDP	576 298		None	None	1 346 200	–	–	None
University of Fort Hare	159 407	30 000	None	None	906 216	350 000	–	None
University of Kwazulu-Natal	–	1 539 008	None	None	12 200	1 673 410	–	None
University of Witwatersrand	-	1 233 474	None	None	–	8 336 511	17 378	None
	11 575 886	**25 004 273**			**5 052 777**	**53 965 643**	**196 799 531**	**0**

Revenue	2024	2023
Dept. of Science and Innovation (DSI)	154 207 488	188 162 351
Dept of Social development	442 250	287 500
Africa Health Research Institute	86 957	–
CAPRISA	7 350 635	624 127
GARDP	1 309 767	7 109 171
Lubombo Spatial develop	472 279	1 707 783
National Research Foundation	8 237 849	6 726 731
North West University	42 696	104 153
University of Cape Town	7 857 696	1 798 423
UCT Lung Institute	–	120 000
University of Fort Hare	405 408	788 014
University of Kwa-Zulu Natal	184 831	12 200
University of Limpopo	–	233 709
University of Pretoria	246 057	69 283
University of South Africa	–	343 498
University of Stellenbosch	10 895 768	7 350 088
University of Witwatersrand	1 646 425	215 130
WITS Health Consortium	1 724 197	1 761 584
	195 110 301	**217 413 746**

Expenditure such as grants awarded, extra-mural unit grants and collaborative research grants incurred with notable parties	2024	2023
African Health Research Institute	10 597 144	3 683 907
CAPRISA	4 915 979	5 724 903
DNDI GARDP	2 500 000	–
Hutchkinson Centre	7 942 210	13 039 291
National Research Foundation (NRF)	5 281 375	1 540 000
North West University	3 899 110	4 800 451
UCT	87 839 485	87 289 327
UCT Lung Institute	1 274 627	–
Sefako University	–	–
TENET	–	–
University of KwaZulu-Natal	23 534 945	6 863 903
University of Limpopo	–	13 011 496
University of Pretoria	11 310 480	8 118 065
University of Fort Hare	2 417 741	2 545 285
UNISA	4 817 978	4 422 271
University of Stellenbosch	45 129 399	52 229 767
Univ of Witwatersrand	25 961 408	22 761 735
Univ of Zululand	–	500 000
Wits Health Consortium	60 688 124	80 162 944
	298 110 004	**306 693 346**

FINANCIAL INFORMATION

INDEX

The reports and statements set out below comprise the annual financial statements:

NATURE OF BUSINESS AND PRINCIPAL ACTIVITIES

The South African Medical Research Council (SAMRC) is a Schedule 3A public entity, it is accountable to Parliament for its performance and budget. The mandate of the SAMRC, in terms of the MRC Act 58, 1991 (as amended), is to improve the health and quality of life of South Africans. This needs to be realised through research, capacity development and technology transfer. SAMRC focuses on the top ten causes of death and disability associated risk factors. SAMRC acquires the most accurate healthcare information and provides policy makers with tools to enhance the quality of life for the people in South Africa. The address of the SAMRC's principal place of business is Francie Van Zijl Drive, Parowvalley, Cape Town.

REPORT OF THE CHIEF EXECUTIVE OFFICER & PRESIDENT

General financial review

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

Revenue for the year showed an increase of 6% to R1 347 255 (R1 270 637). This consists of a decrease in government grants of 2% to R660 413 (R677 264) offset by an increase in contract income of 16% to R686 842 (R593 373).

Other income has decreased significantly by 26% to R20 648 (R28 030) decrease in conference and seminar activities and exchange gains generated on foreign currency grant income.

Operating expenses reflected an increase of 9% to R1 451 905 (R1 333 008). This is mainly the result of continued increased research activities funded from contract income.

This has resulted in an operating deficit of R84 001 for the year compared to an operating deficit of R34 340 in 2022/23. A significant increase in investment income of 48% to R62 795 (R42 545) due to an increase in the average balance of investments during the year under review as well as the higher interest rates resulted in a net deficit for the year of R21 366 compared to a net surplus of R7 545 in 2022/2023.

The organisation remains financially strong with accumulated reserves of R412 948 (R434 315).

Total assets have decreased by 14% to R1 009 310 (R1 171 837) due mainly to a decrease in cash and cash equivalents of R197 602 offset by an increase in Property, Plant and Equipment of R34 755 due to increased capital expenditure on Laboratory equipment and Information Technology.

Deferred income has decreased by R100 995 to R448 637 (R549 632).

The SAMRC generated a negative operating cashflow of R142 334 compared to a positive operating cashflow of R75 981 in the prior period due mainly to an increase in payments to suppliers and a decrease cash received.

Net cash flows from investing activities were positive due mainly to capital expenditure of R43 423 (R52 981).

The net impact of the above is a decrease of R195 708 in cash and cash equivalents compared to an increase of R21 547 in cash and cash equivalents in the prior year.

Spending trends

Operating expenses reflected an increase of 9% to R1 451 905 (R1 333 008). This is mainly the result of continued increased research activities and includes increases in employee costs of R67 883, travel and subsistence of R12 397, collaborative research costs of R6 828 and the surrendering of surplus to National Treasury of R20m.

Employee related costs have increased by 14% to R551 948 (R484 065) driven mainly by basic salary costs which have increased by 12% to R445 861 (R399 495). Employee related costs include net bonus provision costs of R15 815 (R6 391). The net asset pertaining to the Pension Fund and Post-Retirement medical aid obligations has increased by R2 081 compared to an increase of R2 428 in the prior year.

The net deficit for the year of R21 366 compared to a final budget deficit of R 25 878. Revenue was R117 928 over budget while expenditure was R113 417 over budget. This was due to higher than anticipated contract income recognised of R115 151 due to the increase in research activity as well as other non-tax revenue of R35 128.

Compensation of employees exceed the budget by R87 580 and Goods and Services by R20 083 due to recognition of external contract and grant revenue.

Requests for roll over of funds

The organisation remains financially strong with accumulated reserves of R412 948 (R434 315). The necessary approvals will be sought for the rollover of funds received from Government but not yet spent.

Supply chain management

There were no unsolicited bid proposals received during the year. The revised Materiality Framework was approved by the Minister.

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 R724 161 for 2024/25 have been approved by Government. This together with accumulated reserves of R412 948 and the increase anticipated in the value of grants received will ensure that the SAMRC will continue to operate.

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE SOUTH AFRICAN MEDICAL RESEARCH COUNCIL

Report on the audit of the financial statements

Opinion

1. I have audited the financial statements of the South African Medical Research Council (SAMRC) set out on pages 225 to 298, which comprise the statement of financial position as at 31 March 2024, statement of financial performance, statement of changes in net assets, cash flow statement and statement of comparison of budget and actual amounts for the year then ended, as well as notes to the financial statements, including a summary of significant accounting policies.
2. In my opinion, the financial statements present fairly, in all material respects, the financial position of the South African Medical Research Council as at 31 March 2024 and its financial performance and cash flows for the year then ended in accordance with the Standards of Generally Recognised Accounting Practice (GRAP) and the requirements of the Public Finance Management Act 1 of 1999 (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the responsibilities of the auditor-general for the audit of the financial statements section of my report.
4. I am independent of the entity in accordance with the *International Ethics Standards Board for Accountants' International code of ethics for professional accountants (including International Independence Standards)* (IESBA code) as well as other ethical requirements that are relevant to my audit in South Africa. I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA code.
5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Other matter

6. I draw attention to the matter below. My opinion is not modified in respect of this matter.

Unaudited supplementary schedule

7. The supplementary information set out on page 299 does not form part of the financial statements and is presented as additional information. I have not audited this schedule and, accordingly, I do not express an opinion on it.

Responsibilities of the accounting authority for the financial statements

8. The board, which constitutes the accounting authority, is responsible for the preparation and fair presentation of the financial statements in accordance with GRAP and the requirements of the PFMA; and for such internal control as the accounting authority determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.
9. In preparing the financial statements, the accounting authority is responsible for assessing the entity's ability to continue as a going concern; disclosing, as applicable, matters relating to going concern; and using the going concern basis of accounting unless the appropriate governance structure either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Responsibilities of the auditor-general for the audit of the financial statements

10. My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error; and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.
11. A further description of my responsibilities for the audit of the financial statements is included in the annexure to this auditor's report. This description, which is located at page 219, forms part of our auditor's report.

Report on the annual performance report

12. In accordance with the Public Audit Act 25 of 2004 (PAA) and the general notice issued in terms thereof, I must audit and report on the usefulness and reliability of the reported performance information against predetermined objectives for the selected material performance indicators presented in the annual performance report. The accounting authority is responsible for the preparation of the annual performance report.
13. I selected the following material performance indicators related to programme 2 — core research presented in the annual performance report for the year ended 31 March 2024. I selected those indicators that measure the public entity's performance on its primary mandated functions and that are of significant national, community or public interest.

    - 2.1.1 Number of accepted and published journal articles, book chapters and books by the SAMRC affiliated and/or funded authors
    - 2.1.2 Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC
    - 2.2.1 Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC
    - 2.3.1 Number of research grants awarded by the SAMRC

14. I evaluated the reported performance information for the selected material performance indicators against the criteria developed from the performance management and reporting framework, as defined in the general notice. When an annual performance report is prepared using these criteria, it provides useful and reliable information and insights to users on the public entity's planning and delivery on its mandate and objectives.
15. I performed procedures to test whether:

    - the indicators used for planning and reporting on performance can be linked directly to the public entity's mandate and the achievement of its planned objectives
    - all the indicators relevant for measuring the public entity's performance against its primary mandated and prioritised functions and planned objectives are included
    - the indicators are well defined to ensure that they are easy to understand and can be applied consistently, as well as verifiable so that I can confirm the methods and processes to be used for measuring achievements
    - the targets can be linked directly to the achievement of the indicators and are specific, time bound and measurable to ensure that it is easy to understand what should be delivered and by when, the required level of performance as well as how performance will be evaluated
    - the indicators and targets reported on in the annual performance report are the same as those committed to in the approved initial or revised planning documents
    - the reported performance information is presented in the annual performance report in the prescribed manner
    - there is adequate supporting evidence for the achievements reported and for the reasons provided for any over- or underachievement of targets.

16. I performed the procedures to report material findings only; and not to express an assurance opinion or conclusion.
17. I did not identify any material findings on the reported performance information for the selected indicators.

Report on compliance with legislation

18. In accordance with the PAA and the general notice issued in terms thereof, I must audit and report on compliance with applicable legislation relating to financial matters, financial management and other related matters. The accounting authority is responsible for the public entity's compliance with legislation.
19. I performed procedures to test compliance with selected requirements in key legislation in accordance with the findings engagement methodology of the Auditor-General of South Africa (AGSA). This engagement is not an assurance engagement. Accordingly, I do not express an assurance opinion or conclusion.

20. Through an established AGSA process, I selected requirements in key legislation for compliance testing that are relevant to the financial and performance management of the public entity, clear to allow consistent measurement and evaluation, while also sufficiently detailed and readily available to report in an understandable manner. The selected legislative requirements are included in the annexure to this auditor's report
21. I did not identify any material non-compliance with the selected legislative requirements..

Other information in the annual report

22. The accounting authority is responsible for the other information included in the annual report. The other information referred to does not include the financial statements, the auditor's report and those selected material indicators in the scoped-in programme presented in the annual performance report that have been specifically reported on in this auditor's report.
23. My opinion on the financial statements, the report on the audit of the annual performance report and the report on compliance with legislation do not cover the other information included in the annual report and I do not express an audit opinion or any form of assurance conclusion on it.
24. My responsibility is to read this other information and, in doing so, consider whether it is materially inconsistent with the financial statements and the selected material indicators in the scoped-in programme presented in the annual performance report or my knowledge obtained in the audit, or otherwise appears to be materially misstated.
25. If, based on the work I have performed, I conclude that there is a material misstatement in this other information, I am required to report on that fact.
26. I have nothing to report in this regard.

Internal control deficiencies

27. I considered internal control relevant to my audit of the financial statements, annual performance report and compliance with applicable legislation; however, my objective was not to express any form of assurance on it.
28. I did not identify any significant deficiencies in internal control.

Cape Town
31 July 2024

AUDITOR-GENERAL
SOUTH AFRICA

ANNEXURE TO THE AUDITOR'S REPORT

The annexure includes the following:

- the auditor-general's responsibility for the audit
- the selected legislative requirements for compliance testing.

Auditor-general's responsibility for the audit

Professional judgement and professional scepticism

As part of an audit in accordance with the ISAs, I exercise professional judgement and maintain professional scepticism throughout my audit of the financial statements and the procedures performed on reported performance information for selected material performance indicators and on the public entity's compliance with selected requirements in key legislation.

Financial statements

In addition to my responsibility for the audit of the financial statements as described in this auditor's report, I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made
- conclude on the appropriateness of the use of the going concern basis of accounting in the preparation of the financial statements. I also conclude, based on the audit evidence obtained, whether a material uncertainty exists relating to events or conditions that may cast significant doubt on the ability of the entity to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify my opinion on the financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause an entity to cease operating as a going concern
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and determine whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation

Communication with those charged with governance

I communicate with the accounting authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the accounting authority with a statement that I have complied with relevant ethical requirements regarding independence and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence and, where applicable, actions taken to eliminate threats or safeguards applied.

ANNEXURE TO THE AUDITOR'S REPORT (CONTINUED)

Compliance with legislation – selected legislative requirements

The selected legislative requirements are as follows:

Legislation	Sections or regulations
South African Medical Research Council Act 58 of 1991	Regulations and instructions issued in terms of the act
Public Finance Management Act 1 of 1999	Section 51(1)(b)(i); 51(1)(b)(ii); 51(1)(e)(iii); 53(4); Section 54(2)(c); 54(2)(d); 55(1)(a); 55(1)(b); Section 55(1)(c)(i); 56(1); 57(b); 66(3)(c)
Treasury Regulations, 2005	Regulation 8.2.1; 8.2.2; 16A3.2; 16A3.2(a); Regulation 16A6.1; 16A6.2(a); 16A6.2(b); Regulation 16A6.3(a); 16A6.3(a); 16A6.3(b); Regulation 16A6.3(c); 16A6.3(e); 16A6.4; 16A6.5; Regulation 16A6.6; 16A.7.1; 16A.7.3; 16A.7.6; Regulation 16A.7.7; 16A8.3; 16A8.4; 16A9.1(b)(ii); Regulation 16A 9.1(d); 16A9.1(e); 16A9.1(f); Regulation 16A9.2; 16A9.2(a)(ii); 30.1.1; 30.1.3(a); Regulation 30.1.3(b); 30.1.3(d); 30.2.1; 31.2.1; Regulation 31.2.5; 31.2.7(a); 32.1.1(a); 32.1.1(b); Regulation 32.1.1(c); 33.1.1; 33.1.3
Construction Industry Development Board Act 38 of 2000	Section 18(1)
Construction Industry Development Board Regulations, 2004	Regulation 17; 25(7A)
Second amendment National Treasury Instruction No. 5 of 2020/21	Paragraph 1
Erratum National Treasury Instruction No.5 of 2020/21	Paragraph 2
National Treasury instruction No. 5 of 2020/21	Paragraph 4.8; 4.9; 5.3
National Treasury Instruction No. 1 of 2021/22	Paragraph 4.1
National Treasury Instruction No. 4 of 2015/16	Paragraph 3.4
National Treasury SCM Instruction No. 4A of 2016/17	Paragraph 6
National Treasury SCM Instruction No. 03 of 2021/22	Paragraph 4.1; 4.2(b); 4.3; 4.4; 4.4(a); 4.17; 7.2; Paragraph 7.6
National Treasury SCM Instruction No. 11 of 2020/21	Paragraph 3.4(a); 3.4(b); 3.9

Legislation	Sections or regulations
National Treasury SCM Instruction No. 2 of 2021/22	Paragraph 3.2.1; 3.2.4; 3.2.4(a); 3.3.1
Practice Note 5 of 2009/10	Paragraph 3.3
Practice Note 7 of 2009/10	Paragraph 4.1.2
Preferential Procurement Policy Framework Act 5 of 2000	Section 1; 2.1(a); 2.1(f)
Preferential Procurement Regulations, 2022	Regulation 4.1; 4.2; 4.3; 4.4; 5.1; 5.2; 5.3; 5.4
Preferential Procurement Regulations, 2017	Regulation 4.1; 4.2; 5.1; 5.3; 5.6; 5.7; 6.1; 6.2; 6.3; Regulation 6.6; 6.8; 7.1; 7.2; 7.3; 7.6; 7.8; Regulation 8.2; 8.5; 9.1; 9.2; 10.1; 10.2; 11.1; 11.2
Prevention and Combating of Corrupt Activities Act 12 of 2004	Section 34(1)

ACCOUNTING AUTHORITY'S RESPONSIBILITIES AND APPROVAL

The Accounting Authority is required by the Public Finance Management Act (Act 1 of 1999), to maintain adequate accounting records and is responsible for the content and integrity of the annual financial statements and related financial information included in this report. It is the responsibility of the Accounting Authority to ensure that the annual financial statements fairly present the state of affairs of the entity as at the end of the financial year and the results of its operations and cash flows for the period then ended. The external auditors are engaged to express an independent opinion on the financial statements and were given unrestricted access to all financial records and related data.

The annual financial statements have been prepared in accordance with Standards of Generally Recognised Accounting Practice (GRAP) including any interpretations, guidelines and directives issued by the Accounting Standards Board.

The annual financial statements are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgements and estimates. On a quarterly basis the Accounting Authority approved revised estimates in response to additional income received and progress with research projects.

The Accounting Authority acknowledges that it is ultimately responsible for the system of internal financial control established by the entity and places considerable importance on maintaining a strong control environment. To enable the Accounting Authority to meet these responsibilities, the Accounting Authority sets standards for internal control aimed at reducing the risk of error or in a cost effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the entity and all employees are required to maintain the highest ethical standards in ensuring the entity's business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of risk management in the entity is on identifying, assessing, managing and monitoring all known forms of risk across the entity. While operating risk cannot be fully eliminated, the entity endeavours to minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The Accounting Authority is of the opinion, based on the information and explanations given by management, that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the annual financial statements. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement.

The Accounting Authority has reviewed the entity's cash flow forecast for the year ended to 31 March 2025 and, in the light of this review and the current financial position, is satisfied that the entity has or has access to adequate resources to continue in operational existence for the foreseeable future.

Although the Accounting Authority is primarily responsible for the financial affairs of the entity, they are supported by the entity's external auditors by providing reasonable assurance of the entity's financial affairs.

The external auditors are responsible for independently reviewing and reporting on the entity's annual financial statements. The annual financial statements have been examined by the entity's external auditors and their report is presented on page 216.

The annual financial statements set out on page 225, which have been prepared on the going concern basis, were approved by the Accounting Authority on 29 July 2024 and were signed on its behalf by:

Professor J. Mahlangu
Chairperson of the Board

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

AUDIT COMMITTEE REPORT

We are pleased to present our report for the financial year ended 31 March, 2024.

Audit committee members and attendance

The audit committee consists of the members listed hereunder and should meet 4 times per annum as per its approved terms of reference. During the current year 6 number of meetings were held. The unaudited annual financial statements were reviewed and discussed at a meeting held on 22 May 2024.

NAME OF MEMBER	NUMBER OF MEETINGS ATTENDED
Ms D Dondur (Chairperson from 1 November 2022)	6
Doctor M Madikizela (appointed 1 November 2019)	5
Professor T Mavundla (appointed 1 November 2019)	3
Professor E Mukwevho (appointed 1 November 2022)	6
Associate professor T Naledi (appointed 1 November 2022)	6
Ms J Williams (independent audit committee member from 1 November 2022)	5
Mr J Watson (independent audit committee member)	6

Audit committee responsibility

The audit committee reports that it has complied with its responsibilities arising from section 55(1)(a) of the PFMA and Treasury Regulation 27.1.

The audit committee also reports that it has adopted appropriate formal terms of reference as its audit committee charter, has regulated its affairs in compliance with this charter and has discharged all its responsibilities as contained therein.

The effectiveness of internal control

The system of internal controls applied by the entity over financial and risk management is effective, efficient and transparent. In line with the PFMA and the King IV Report on Corporate Governance requirements, Internal Audit provides the audit committee and management with assurance that the internal controls are appropriate and effective. This is achieved by means of the risk management process, as well as the identification of corrective actions and suggested enhancements to the controls and processes. From the various reports of the Internal Auditors, the Audit Report on the annual financial statements, and the management report of the Auditor-General South Africa, it was noted that no matters were reported that indicate any material deficiencies in the system of internal control or any deviations therefrom.

Accordingly, we can report that the system of internal control over financial reporting for the period under review was efficient and effective.

The audit committee is satisfied with the content and quality of monthly and quarterly reports prepared and issued by the of the entity during the year under review.

Evaluation of annual financial statements

The audit committee has:

- reviewed and discussed the audited annual financial statements to be included in the annual report, with the Auditor-General and the Accounting authority;
- reviewed the Auditor-General of South Africa's management report and management's response thereto;
- reviewed changes in accounting policies and practices;
- reviewed the entities compliance with legal and regulatory provisions;

Internal audit

The audit committee is satisfied that the internal audit function is operating effectively and that it has addressed the risks pertinent to the entity and its audits.

AUDIT COMMITTEE REPORT (CONTINUED)

Auditor-General of South Africa

The audit committee has met with the Auditor-General of South Africa to ensure that there are no unresolved issues.

Risk Management

The risk management activity has received corporate endorsement and risk management processes have been formalised and adopted. Risk management activities are reported on a quarterly basis.

Information Systems

During the year under review hardware and infrastructural upgrades were implemented. Additional functionality was implemented on the research management platform. Security processes were reviewed during the period under review. Security training was rolled out during the year-under review.

Ms Doris Dondur
Chairperson of the Audit Committee
Date: 31 August 2024

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

STATEMENT OF FINANCIAL POSITION AS AT 31 MARCH 2024

	NOTE(S)	31 MARCH 2024 R	31 MARCH 2023 R
Assets			
Current Assets			
Financial assets at fair value	3	9,551,014	9,149,013
Receivables from exchange transactions	4	88,216,813	112,677,459
Receivables from non-exchange transactions	5	9,055,438	5,517,069
VAT receivable	6	25,439,861	16,208,647
Prepayments	7	15,370,930	11,019,539
Cash and cash equivalents	8	522,082,612	719,684,368
		669,716,668	**874,256,095**
Non-Current Assets			
Biological assets that form part of an agricultural activity	9	25,000	25,000
Property, plant and equipment	10	310,432,000	275,676,596
Intangible assets	11	19,113,116	14,223,042
Living resources	12	1,063,039	1,162,147
Investments in controlled entities	13	2	2
Employee benefit asset	17	8,961,000	6,494,000
		339,594,157	**297,580,787**
Total Assets		**1,009,310,825**	**1,171,836,882**
Liabilities			
Current Liabilities			
Payables from exchange transactions	14	115,637,520	166,490,447
Provisions	15	21,019,052	11,073,721
Deferred income	16	448,637,352	549,632,730
		585,293,924	**727,196,898**
Non-Current Liabilities			
Employee benefit obligation	17	5,913,000	5,527,000
Earmarked funds	18	5,155,290	4,797,766
		11,068,290	**10,324,766**
Total Liabilities		**596,362,214**	**737,521,664**
Net Assets		**412,948,611**	**434,315,218**
Accumulated surplus	19	412,948,611	434,315,218

STATEMENT OF FINANCIAL PERFORMANCE

	NOTE(S)	31 MARCH 2024 R	31 MARCH 2023 R
Revenue	20	1,347,255,678	1,270,637,434
Other income	21	20,648,418	28,030,495
Operating expenses	23	(1,451,905,870)	(1,333,008,032)
Operating deficit	32	**(84,001,774)**	**(34,340,103)**
Investment income	22	62,795,287	42,545,875
Fair value adjustments	30	211,431	(367,464)
Finance costs	25	(371,551)	(293,179)
(Deficit) surplus for the year		**(21,366,607)**	**7,545,129**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

STATEMENT OF CHANGES IN NET ASSETS

	TOTAL NET ASSETS R
Balance at 1 April, 2022	**426,770,089**
Changes in net assets	
Surplus for the year	7,545,129
Total changes	7,545,129
Balance at 1 April, 2023	**434,315,218**
Changes in net assets	
Deficit for the year	(21,366,607)
Total changes	(21,366,607)
Balance at 31 March, 2024	**412,948,611**

CASH FLOW STATEMENT

	NOTE(S)	31 MARCH 2024 R	31 MARCH 2023 R
Cash flows from operating activities			
Receipts			
Interest income		62,613,758	42,317,948
Dividends received		181,529	227,927
Cash received from customers and grants		1,257,805,419	1,329,664,509
		1,320,600,706	1,372,210,384
Payments			
Suppliers		(1,462,563,440)	(1,295,936,093)
Finance costs		(371,551)	(293,179)
		(1,462,934,991)	(1,296,229,272)
Net cash flows from operating activities	33	**(142,334,285)**	**75,981,112**
Cash flows from investing activities			
Purchase of property, plant and equipment	10	(43,423,123)	(52,981,179)
Proceeds from sale of property, plant and equipment	10	373,175	216,144
Proceeds from sale of financial assets		1,170	4,330
Purchase of other intangible assets	11	(10,682,667)	(1,913,572)
Net cash flows from investing activities		**(53,731,445)**	**(54,674,277)**
Cash flows from financing activities			
Movement in earmarked funds		357,524	240,868
Net cash flows from financing activities		**357,524**	**240,868**
Net increase/(decrease) in cash and cash equivalents		**(195,708,206)**	**21,547,703**
Cash and cash equivalents at the beginning of the year		719,684,368	695,596,899
Effect of exchange rate movement on cash balances		(1,893,550)	2,539,766
Cash and cash equivalents at the end of the year	8	**522,082,612**	**719,684,368**

An amount of R448,637,352 (31 March 2023: R549,632,730) included in cash and cash equivalents is due to cash received from funders for research projects in progress or not yet completed.

The accounting policies on pages 230 to 259 and the notes on pages 260 to 298 form an integral part of the annual financial statements.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

STATEMENT OF COMPARISON OF BUDGET AND ACTUAL AMOUNTS

Budget on Accrual Basis

	APPROVED BUDGET R	ADJUSTMENTS R	FINAL BUDGET R	ACTUAL AMOUNTS ON COMPARABLE BASIS R	DIFFERENCE BETWEEN FINAL BUDGET AND ACTUAL R	REFERENCE
Statement of Financial Performance						
Revenue						
Non-tax revenue						
Sale of goods and services	466,858,000	104,833,000	**571,691,000**	686,842,635	**115,151,635**	41
Other non-tax revenue	48,527,000	–	**48,527,000**	83,655,136	**35,128,136**	41
Transfers received	797,597,000	(104,833,000)	**692,764,000**	660,413,043	**(32,350,957)**	41
Total revenue	**1,312,982,000**	**–**	**1,312,982,000**	**1,430,910,814**	**117,928,814**	
Expenditure						
Compensation of employees	(464,369,000)	–	**(464,369,000)**	(551,948,716)	**(87,579,716)**	41
Goods and services	(743,435,000)	(104,161,000)	**(847,596,000)**	(867,679,191)	**(20,083,191)**	41
Depreciation	(26,895,000)	–	**(26,895,000)**	(32,649,514)	**(5,754,514)**	
Transfers and subsidies	(104,161,000)	104,161,000	**–**	–	**–**	
Total expenditure	**(1,338,860,000)**	**–**	**(1,338,860,000)**	**(1,452,277,421)**	**(113,417,421)**	
Surplus/(deficit)	**(25,878,000)**	**–**	**(25,878,000)**	**(21,366,607)**	**4,511,393**	
Actual Amount on Comparable Basis as Presented in the Budget and Actual Comparative Statement	**(25,878,000)**	**–**	**(25,878,000)**	**(21,366,607)**	**4,511,393**	

SIGNIFICANT ACCOUNTING POLICIES

1. Presentation of Annual Financial Statements

The annual financial statements have been prepared in accordance with the Standards of Generally Recognised Accounting Practice (GRAP), issued by the Accounting Standards Board in accordance with Section 91(1) of the Public Finance Management Act (Act 1 of 1999).

These annual financial statements have been prepared on an accrual basis of accounting and are in accordance with historical cost convention as the basis of measurement, unless specified otherwise. They are presented in South African Rand, which is also the functional currency. The amounts presented in the annual financial statements are rounded to the nearest Rand.

In the absence of an issued and effective Standard of GRAP, accounting policies for material transactions, events or conditions were developed in accordance with paragraphs 8, 10 and 11 of GRAP 3 as read with Directive 5.

Assets, liabilities, revenues and expenses were not offset, except where offsetting is either required or permitted by a Standard of GRAP.

A summary of the significant accounting policies, which have been consistently applied in the preparation of these annual financial statements, are disclosed below.

These accounting policies are consistent with the previous period.

1.1 Going concern assumption

These annual financial statements have been prepared based on the expectation that the entity will continue to operate as a going concern for at least the next 12 months.

1.2 Materiality

Material omissions or misstatements of items are material if they could, individually or collectively, influence the decisions or assessments of users made on the basis of the financial statements. Materiality depends on the nature or size of the omission or misstatement judged in the surrounding circumstances. The nature or size of the information item, or a combination of both, could be the determining factor.

Assessing whether an omission or misstatement could influence decisions of users, and so be material, requires consideration of the characteristics of those users. The Framework for the Preparation and Presentation of Financial Statements states that users are assumed to have a reasonable knowledge of government, its activities, accounting and a willingness to study the information with reasonable diligence. Therefore, the assessment takes into account how users with such attributes could reasonably be expected to be influenced in making and evaluating decisions.

1.3 Significant judgements and sources of estimation uncertainty

In preparing the annual financial statements, management is required to make estimates and assumptions that affect the amounts represented in the annual financial statements and related disclosures. Use of available information and the application of judgement is inherent in the formation of estimates. Actual results in the future could differ from these estimates which may be material to the annual financial statements. Significant judgements include:

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.3 Significant judgements and sources of estimation uncertainty (continued)

Trade receivables and loans and receivables

The entity assesses its trade receivables and loans and receivables for impairment at the end of each reporting period. In determining whether an impairment loss should be recorded in surplus or deficit, the entity makes judgements as to whether there is observable data indicating a measurable decrease in the estimated future cash flows from a financial asset.

The impairment for trade receivables and loans and receivables is calculated on a portfolio basis, based on a review of the full trade debtors book, adjusted for national and industry-specific economic conditions and other indicators present at the reporting date that correlate with defaults on the portfolio.

Fair value estimation

The fair value of financial instruments traded in active markets (such as trading) is based on quoted market prices at the end of the reporting period. The quoted market price used for financial assets held by the entity is the current bid price.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. The entity uses a variety of methods and makes assumptions that are based on market conditions existing at the end of each reporting period. Quoted market prices or dealer quotes for similar instruments are used for financial assets. Other techniques, such as estimated discounted cash flows, are used to determine fair value for the remaining financial instruments.

The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the entity for similar financial instruments.

Impairment testing

The entity reviews and tests the carrying value of current and non-current assets when events or changes in circumstances suggest that the carrying amount may not be recoverable. Assets are grouped at the lowest level for which identifiable cash flows are largely independent of cash flows of other assets and liabilities. If there are indications that impairment may have occurred, estimates are prepared of expected future cash flows for each group of assets. Expected future cash flows used to determine the value in use of tangible assets are inherently uncertain and could materially change over time. They are significantly affected by a number of factors including supply demand, together with economic factors such as research units closed as part of the revitalisation process.

Provisions

Provisions were raised and management determined an estimate based on the information available. Additional disclosure of these estimates of provisions are included in note 15 – Provisions.

Post retirement benefits

The present value of the post retirement obligation depends on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumptions used in determining the net cost (income) include the discount rate. Any changes in these assumptions will impact on the carrying amount of post retirement obligations.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.3 Significant judgements and sources of estimation uncertainty (continued)

The entity determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension obligations. In determining the appropriate discount rate, the entity considers the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension liability.

Other key assumptions for pension obligations are based on current market conditions. Additional information is disclosed in Note 17.

Useful lives of property, plant and equipment and Intangible assets

Management assesses the appropriateness of the useful lives of property, plant and equipment and Intangible assets at the end of each reporting period. The useful lives of motor vehicles; furniture and office equipment; computer equipment; laboratory equipment; certain components of buildings and intangible assets are determined based on the entity's replacement practices for the various assets and factors such as technological innovation.

When the estimated useful life of an asset differs from previous estimates, the change is accounted for as a change in estimate.

Recognition of an asset acquired through a non-exchange transaction

An item of property, plant and equipment acquired by means of a donation, the cost recognised is at its fair value as at the date of acquisition.

Biological assets

The fair value of biological assets is determined by the last selling price per biological animal type.

Budget judgements

Variance amounts above materiality will be disclosed in note 41.

Disclosure of items

Where the deemed fair value of services in-kind was below materiality the note is not included in the annual financial statements.

1.4 Biological assets that form part of an agricultural activity

The entity recognises biological assets or agricultural produce when, and only when:

- the entity controls the asset as a result of past events;
- it is probable that future economic benefits or service potential associated with the asset will flow to the entity; and
- the fair value or cost of the asset can be measured reliably.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.4 Biological assets that form part of an agricultural activity (continued)

Biological assets are measured at their fair value less costs to sell.

Agricultural produce harvested from an entity's biological assets shall be measured at its fair value less estimated costs to sell at point of harvest.

A gain or loss arising on initial recognition of biological assets at fair value less costs to sell and from a change in fair value less estimated costs to sell biological assets is included in surplus or deficit for the period in which it arises.

Where biological assets are acquired at no cost, or for a nominal cost, the cost is determined to be its fair value less costs to sell as at the date of acquisition.

Where fair value cannot be measured reliably, biological assets are measured at cost less any accumulated impairment losses.

Horses are classified as biological assets.

1.5 Property, plant and equipment

Property, plant and equipment are tangible non-current assets (including infrastructure assets) that are held for use in the production or supply of goods or services, rental to others, or for administrative purposes, and are expected to be used during more than one period.

The cost of an item of property, plant and equipment is recognised as an asset when:

- it is probable that future economic benefits or service potential associated with the item will flow to the entity; and
- the cost or fair value of the item can be measured reliably.

Property, plant and equipment is initially measured at cost.

The cost of an item of property, plant and equipment is the purchase price and other costs attributable to bring the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Trade discounts and rebates are deducted in arriving at the cost. Subsequent costs of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the asset if it is probable that the future economic benefits embodied within the part will flow to the entity and its costs can be measured reliably. The cost of the replaced part is derecognised. The costs of day to day servicing of property, plant and equipment are recognised in the surplus or deficit.

Where an asset is acquired through a non-exchange transaction, its cost is its fair value as at the date of acquisition.

When significant components of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

The entity identified the following major components of buildings as generators; buildings; prefabricated buildings; borehole tanks and pumps; water meters; water pipes and air conditioners.

The entity identified the following major components of laboratory equipment as laboratory equipment and irrigation equipment.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.5 Property, plant and equipment (continued)

The entity identified the following major components of furniture and office equipment as furniture and office equipment and signage.

Property, plant and equipment is carried at cost less accumulated depreciation and any impairment losses.

Property, plant and equipment are depreciated on the straight line basis over their expected useful lives to their estimated residual value.

The useful lives of items of property, plant and equipment have been assessed as follows:

ITEM	DEPRECIATION METHOD	AVERAGE USEFUL LIFE
Land (including boreholes)	Not depreciated	Indefinite
Buildings	Straight line	40 – 50 years
Vehicles and containers	Straight line	5 – 10 years
Furniture and office equipment	Straight line	3 – 15 years
Computer equipment	Straight line	5 – 10 years
Generators	Straight line	20 – 30 years
Borehole tanks and pumps	Straight line	10 – 15 years
Air conditioners	Straight line	10 – 15 years
Irrigation equipment	Straight line	10 – 15 years
Signage	Straight line	10 – 15 years
Prefabricated buildings	Straight line	20 – 30 years
Water pipes	Straight line	20 – 30 years
Water meters	Straight line	10 – 15 years
Laboratory equipment	Straight line	5 – 30 years

The items listed above are grouped in land; buildings; vehicles and containers; furniture and office equipment; computer equipment and laboratory equipment classes.

The residual value, the useful life and depreciation method of each asset is reviewed at the end of each reporting date. If the expectations differ from previous estimates, the change is accounted for as a change in accounting estimate. The useful lives of assets are based on management's estimation. The actual useful lives of assets and residual values are assessed annually and may vary depending on a number of factors. In re-assessing asset useful lives, factors such as technology, innovation, product life cycles and maintenance programmes are taken into account. The estimation of residual values of assets determines whether they will be sold or used to the end of their useful lives and what their condition would be like at that time. Residual value assessments consider issues such as, the remaining life of the asset and the estimated amount which the entity would currently obtain.

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately.

The depreciation charge for each period is recognised in surplus or deficit unless it is included in the carrying amount of another asset.

Items of property, plant and equipment are derecognised when the asset is disposed of or when there are no further economic benefits or service potential expected from the use of the asset.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.5 Property, plant and equipment (continued)

The gain or loss arising from the derecognition of an item of property, plant and equipment is included in surplus or deficit when the item is derecognised. The gain or loss arising from the derecognition of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

Assets which the entity sells via auction when it is obsolete or can no longer be used by the entity, are not accounted for as current assets held for sale. Proceeds from sales of these assets are recognised as profit or loss on disposal of assets. All cash flows on these assets are included in cash flows from investing activities in the cash flow statement.

Reviewing the impairment of assets is performed on an annual basis. Assets impaired as a result of restructuring are not accounted for as non-current assets held for sale as these assets will be transferred to institutions of higher learning.

The entity separately discloses expenditure to repair and maintain property, plant and equipment in the notes to the financial statements (see note 10).

1.6 Intangible assets

An asset is identifiable if it either:

- is separable, i.e. is capable of being separated or divided from an entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable assets or liability, regardless of whether the entity intends to do so; or
- arises from contractual rights or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations

An intangible asset is recognised when:

- it is probable that the expected future economic benefits or service potential that are attributable to the asset will flow to the entity; and
- the cost or fair value of the asset can be measured reliably.

Intangible assets are initially recognised at cost.

Where an intangible asset is acquired through a non-exchange transaction, its initial cost at the date of acquisition is measured at its fair value as at that date.

Intangible assets are carried at cost less any accumulated amortisation and any impairment losses. For all intangible assets amortisation is provided on a straight line basis over their useful life.

The amortisation period and the amortisation method for intangible assets are reviewed at each reporting date and any change is accounted for as a change in estimate.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.6 Intangible assets (continued)

Amortisation is provided to write down the intangible assets, on a straight line basis, to their residual values. The estimated useful lives for current and comparative periods are as follows:

ITEM	DEPRECIATION METHOD	AVERAGE USEFUL LIFE
Computer software	Straight line	3 – 10 years

Intangible assets are derecognised:

- on disposal; or
- when no future economic benefits or service potential are expected from its use or disposal.

The gain or loss arising from the derecognition of intangible assets is included in surplus or deficit when the asset is derecognised (unless the Standard of GRAP on leases requires otherwise on a sale and leaseback).

1.7 Investments in controlled entities

Investments in controlled entities are carried at cost less any accumulated impairment. The financial statements of the entity is not consolidated with those of the controlled entities, as the entities have had no trading activities and they are not material.

1.8 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or a residual interest of another entity.

A concessionary loan is a loan granted to or received by an entity on terms that are not market related.

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

Derecognition is the removal of a previously recognised financial asset or financial liability from an entity's statement of financial position.

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability (or group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, an entity shall estimate cash flows considering all contractual terms of the financial instrument (for example, prepayment, call and similar options) but shall not consider future credit losses. The calculation includes all fees and amounts paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts. There is a presumption that the cash flows and the expected life of a group of similar financial instruments can be estimated reliably. However, in those rare cases when it is not possible to reliably estimate the cash flows or the expected life of a financial instrument (or group of financial instruments), the entity shall use the contractual cash flows over the full contractual term of the financial instrument (or group of financial instruments).

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable willing parties in an arm's length transaction.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.8 Financial instruments (continued)

A financial asset is:

- cash;
- a contractual right to:
  - receive cash or another financial asset from another entity; or
  - exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity.

A financial liability is any liability that is a contractual obligation to:

- deliver cash or another financial asset to another entity; or
- exchange financial assets or financial liabilities under conditions that are potentially unfavourable to the entity.

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

Liquidity risk is the risk encountered by an entity in the event of difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset.

Loan commitment is a firm commitment to provide credit under pre-specified terms and conditions.

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk, interest rate risk and other price risk.

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market.

A financial asset is past due when a counterparty has failed to make a payment when contractually due.

Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial asset or financial liability. An incremental cost is one that would not have been incurred if the entity had not acquired, issued or disposed of the financial instrument.

Financial instruments at amortised cost are non-derivative financial assets or non-derivative financial liabilities that have fixed or determinable payments, excluding those instruments that:

- the entity designates at fair value at initial recognition; or
- are held for trading.

Financial instruments at cost are investments in residual interests that do not have a quoted market price in an active market, and whose fair value cannot be reliably measured.

Financial instruments at fair value comprise financial assets or financial liabilities that are:

- derivatives;
- combined instruments that are designated at fair value;
- instruments held for trading. A financial instrument is held for trading if:
  - it is acquired or incurred principally for the purpose of selling or repurchasing it in the near-term; or
  - on initial recognition it is part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short term profit-taking;

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.8 Financial instruments (continued)

- non-derivative financial assets or financial liabilities with fixed or determinable payments that are designated at fair value at initial recognition; and
- financial instruments that do not meet the definition of financial instruments at amortised cost or financial instruments at cost.

Classification

The entity has the following types of financial assets (classes and category) as reflected on the face of the statement of financial position or in the notes thereto:

CLASS	CATEGORY
Trade debtors	Financial asset measured at amortised cost
Shares	Held for trading at fair value
Unit trusts	Held for trading at fair value
Cash and cash equivalents	Financial asset measured at amortised cost
Loans and receivables	Financial asset measured at amortised cost
Employee costs in advance	Financial asset measured at amortised cost
Deposits	Financial asset measured at amortised cost

The entity has the following types of financial liabilities (classes and category) as reflected on the face of the statement of financial position or in the notes thereto:

CLASS	CATEGORY
Trade payables	Financial liabilities measured at amortised cost

Initial recognition

The entity recognises a financial asset or a financial liability in its statement of financial position when the entity becomes a party to the contractual provisions of the instrument.

The entity recognises financial assets using trade date accounting.

Initial measurement of financial assets and financial liabilities

The entity measures a financial asset and financial liability initially at its fair value plus, in the case of a financial asset or a financial liability not subsequently measured at fair value, transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

Subsequent measurement of financial assets and financial liabilities

The entity measures all financial assets and financial liabilities after initial recognition using the following categories:

- Financial instruments at fair value.
- Financial instruments at amortised cost.

All financial assets measured at amortised cost, or cost, are subject to an impairment review. The factors taken into account when considering impairment are solvency and whether the account holder is a slow payer.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.8 Financial instruments (continued)

Impairment and uncollectability of financial assets

The entity assesses at the end of each reporting period whether there is any objective evidence that a financial asset or group of financial assets is impaired.

Financial assets are measured at amortised cost:

If there is objective evidence that an impairment loss on financial assets measured at amortised cost has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account. The amount of the loss is recognised in surplus or deficit.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed by adjusting an allowance account. The reversal does not result in a carrying amount of the financial asset that exceeds what the amortised cost would have been had the impairment not been recognised at the date the impairment is reversed. The amount of the reversal is recognised in surplus or deficit.

If there is objective evidence that an impairment loss has been incurred on an investment in a residual interest that is not measured at fair value because its fair value cannot be measured reliably, the amount of the impairment loss is measured as the difference between the carrying amount of the financial asset and the present value of estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment losses are not reversed.

Presentation

Interest relating to a financial instrument is recognised as revenue in surplus or deficit.

Dividends or similar distributions relating to a financial instrument or a component that is a financial liability is recognised as revenue or expense in surplus or deficit.

Losses and gains relating to a financial instrument or a component that is a financial liability is recognised as revenue or expense in surplus or deficit.

1.9 Statutory receivables

Identification

Statutory receivables are receivables that arise from legislation, supporting regulations, or similar means, and require settlement by another entity in cash or another financial asset.

Carrying amount is the amount at which an asset is recognised in the statement of financial position.

The cost method is the method used to account for statutory receivables that requires such receivables to be measured at their transaction amount, plus any accrued interest or other charges (where applicable) and, less any accumulated impairment losses and any amounts derecognised.

The transaction amount (for purposes of this Standard) for a statutory receivable means the amount specified in, or calculated, levied or charged in accordance with, legislation, supporting regulations, or similar means.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.9 Statutory receivables (continued)

Recognition

The entity recognises statutory receivables as follows:

- if the transaction is an exchange transaction, using the policy on Revenue from exchange transactions;
- if the transaction is a non-exchange transaction, using the policy on Revenue from non-exchange transactions (Taxes and transfers); or
- if the transaction is not within the scope of the policies listed in the above or another Standard of GRAP, the receivable is recognised when the definition of an asset is met and, when it is probable that the future economic benefits or service potential associated with the asset will flow to the entity and the transaction amount can be measured reliably.

Initial measurement

The entity initially measures statutory receivables at their transaction amount.

Subsequent measurement

The entity measures statutory receivables after initial recognition using the cost method. Under the cost method, the initial measurement of the receivable is changed subsequent to initial recognition to reflect any:

- interest or other charges that may have accrued on the receivable (where applicable);
- impairment losses; and
- amounts derecognised.

Derecognition

The entity derecognises a statutory receivable, or a part thereof, when:

- the rights to the cash flows from the receivable are settled, expire or are waived;
- the entity transfers to another party substantially all of the risks and rewards of ownership of the receivable; or
- the entity, despite having retained some significant risks and rewards of ownership of the receivable, has transferred control of the receivable to another party and the other party has the practical ability to sell the receivable in its entirety to an unrelated third party, and is able to exercise that ability unilaterally and without needing to impose additional restrictions on the transfer. In this case, the entity:
  - derecognise the receivable; and
  - recognise separately any rights and obligations created or retained in the transfer.

The carrying amounts of any statutory receivables transferred are allocated between the rights or obligations retained and those transferred on the basis of their relative fair values at the transfer date. The entity considers whether any newly created rights and obligations are within the scope of the Standard of GRAP on Financial Instruments or another Standard of GRAP. Any difference between the consideration received and the amounts derecognised and, those amounts recognised, are recognised in surplus or deficit in the period of the transfer.

1.10 Taxes

The SAMRC is exempt from income tax in terms of section 10 (1) (cA) (i) of the Income Tax Act (Act No. 58 of 1962).

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.11 Leases

Operating leases – lessor

Operating lease revenue is recognised as revenue on a straight-line basis over the lease term.

Initial direct costs incurred in negotiating and arranging operating leases are added to the carrying amount of the leased asset and recognised as an expense over the lease term on the same basis as the lease revenue.

Income for leases is disclosed under revenue in the statement of financial performance.

Operating leases – lessee

Operating lease payments are recognised as an expense on a straight-line basis over the lease term. The difference between the amounts recognised as an expense and the contractual payments are recognised as a prepayment or liability.

1.12 Cash and cash equivalents

Cash and cash equivalents comprise bank balances, cash on hand and deposits held at call with banks.

1.13 Impairment of cash-generating assets

Cash-generating assets are assets managed with the objective of generating a commercial return. An asset generates a commercial return when it is deployed in a manner consistent with that adopted by a profit-oriented entity.

Impairment is a loss in the future economic benefits or service potential of an asset, over and above the systematic recognition of the loss of the asset's future economic benefits or service potential through depreciation (amortisation).

Carrying amount is the amount at which an asset is recognised in the statement of financial position after deducting any accumulated depreciation and accumulated impairment losses thereon.

A cash-generating unit is the smallest identifiable group of assets managed with the objective of generating a commercial return that generates cash inflows from continuing use that are largely independent of the cash inflows from other assets or groups of assets.

Costs of disposal are incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.

Depreciation (Amortisation) is the systematic allocation of the depreciable amount of an asset over its useful life.

Fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

Recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use.

Useful life is either:

(a) the period of time over which an asset is expected to be used by the entity; or

(b) the number of production or similar units expected to be obtained from the asset by the entity.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.14 Impairment of non-cash-generating assets

Cash-generating assets are assets managed with the objective of generating a commercial return. When an asset is deployed in a manner consistent with that adopted by a profit-oriented entity, it generates a commercial return.

Non-cash-generating assets are assets other than cash-generating assets.

Impairment is a loss in the future economic benefits or service potential of an asset, over and above the systematic recognition of the loss of the asset's future economic benefits or service potential through depreciation (amortisation).

Carrying amount is the amount at which an asset is recognised in the statement of financial position after deducting any accumulated depreciation and accumulated impairment losses thereon.

Depreciation (Amortisation) is the systematic allocation of the depreciable amount of an asset over its useful life.

Fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

Recoverable service amount is the higher of a non-cash-generating asset's fair value less costs to sell and its value in use.

Useful life is either:

(a) the period of time over which an asset is expected to be used by the entity; or

(b) the number of production or similar units expected to be obtained from the asset by the entity.

Criteria developed by the annual financial statements to distinguish non-cash-generating assets from cash-generating assets are as follows:

Assets used for administration and in daily operation of the entity is classified as non-cash-generating assets. Where a substantial part of the asset is hired out, the asset is classified as cash generating assets.

Identification

When the carrying amount of a non-cash-generating asset exceeds its recoverable service amount, it is impaired.

The entity assesses at each reporting date whether there is any indication that a non-cash-generating asset may be impaired. If any such indication exists, the entity estimates the recoverable service amount of the asset.

This impairment test is performed at the same time every year. If an intangible asset was initially recognised during the current reporting period, that intangible asset was tested for impairment before the end of the current reporting period.

Value in use

Value in use of non-cash-generating assets is the present value of the non-cash-generating assets remaining service potential.

The present value of the remaining service potential of non-cash-generating assets is determined using the following approach:

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.14 Impairment of non-cash-generating assets (continued)

Restoration cost approach

Restoration cost is the cost of restoring the service potential of an asset to its pre-impaired level. The present value of the remaining service potential of the asset is determined by subtracting the estimated restoration cost of the asset from the current cost of replacing the remaining service potential of the asset before impairment. The latter cost is determined as the depreciated reproduction or replacement cost of the asset, whichever is lower.

Recognition and measurement

If the recoverable service amount of a non-cash-generating asset is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable service amount. This reduction is an impairment loss.

An impairment loss is recognised immediately in surplus or deficit.

When the amount estimated for an impairment loss is greater than the carrying amount of the non-cash-generating asset to which it relates, the entity recognises a liability only to the extent that is a requirement in the Standards of GRAP.

After the recognition of an impairment loss, the depreciation (amortisation) charge for the non-cash-generating asset is adjusted in future periods to allocate the non-cash-generating asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

Reversal of an impairment loss

The entity assesses at each reporting date whether there is any indication that an impairment loss recognised in prior periods for a non-cash-generating asset may no longer exist or may have decreased. If any such indication exists, the entity estimates the recoverable service amount of that asset.

An impairment loss recognised in prior periods for a non-cash-generating asset is reversed if there has been a change in the estimates used to determine the asset's recoverable service amount since the last impairment loss was recognised. The carrying amount of the asset is increased to its recoverable service amount. The increase is a reversal of an impairment loss. The increased carrying amount of an asset attributable to a reversal of an impairment loss does not exceed the carrying amount that would have been determined (net of depreciation or amortisation) had no impairment loss been recognised for the asset in prior periods.

A reversal of an impairment loss for a non-cash-generating asset is recognised immediately in surplus or deficit.

After a reversal of an impairment loss is recognised, the depreciation (amortisation) charge for the non-cash-generating asset is adjusted in future periods to allocate the non-cash-generating asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

1.15 Employee benefits

Employee benefits are all forms of consideration given by SAMRC in exchange for service rendered by employees. An annual valuation of the SAMRC Pension Fund and Post Retirement Medical Aid is performed.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.15 Employee benefits (continued)

A qualifying insurance policy is an insurance policy issued by an insurer that is not a related party (as defined in the Standard of GRAP on Related Party Disclosures) of the reporting entity, if the proceeds of the policy can be used only to pay or fund employee benefits under a defined benefit plan and are not available to the reporting entity's own creditors (even in liquidation) and cannot be paid to the reporting entity, unless either:

- the proceeds represent surplus assets that are not needed for the policy to meet all the related employee benefit obligations; or
- the proceeds are returned to the reporting entity to reimburse it for employee benefits already paid.

Termination benefits are employee benefits payable as a result of either:

- an entity's decision to terminate an employee's employment before the normal retirement date; or
- an employee's decision to accept voluntary redundancy in exchange for those benefits.

Short-term employee benefits

Short-term employee benefits are employee benefits (other than termination benefits) that are due to be settled within twelve months after the end of the period in which the employees render the related service.

When an employee has rendered service to the entity during a reporting period, the entity recognises the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service:

- as a liability (accrued expense), after deducting any amount already paid. If the amount already paid exceeds the undiscounted amount of the benefits, the entity recognises that excess as an asset (prepaid expense) to the extent that the prepayment will lead to, for example, a reduction in future payments or a cash refund.

The expected cost of compensated absences is recognised as an expense as the employees render services that increase their entitlement or, in the case of non-accumulating absences, when the absence occurs. The entity measures the expected cost of accumulating compensated absences as the additional amount that the entity expects to pay as a result of the unused entitlement that has accumulated at the reporting date.

The entity recognises the expected cost of bonus, incentive and performance related payments when the entity has a present legal or constructive obligation to make such payments as a result of past events and a reliable estimate of the obligation can be made. A present obligation exists when the entity has no realistic alternative but to make the payments.

Post-employment benefits

Post-employment benefits are employee benefits (other than termination benefits) which are payable after the completion of employment.

SAMRC offers its employees post-employee benefits to the SAMRC Pension Fund.

Post-employment benefits: Defined contribution plans

Defined contribution plans are post-employment benefit plans under which an entity pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.15 Employee benefits (continued)

When an employee has rendered service to the entity during a reporting period, the entity recognises the contribution payable to a defined contribution plan in exchange for that service:

- as a liability (accrued expense), after deducting any contribution already paid. If the contribution already paid exceeds the contribution due for service before the reporting date, an entity recognises that excess as an asset (prepaid expense) to the extent that the prepayment will lead to, for example, a reduction in future payments or a cash refund; and
- as an expense, unless another Standard requires or permits the inclusion of the contribution in the cost of an asset.

Where contributions to a defined contribution plan do not fall due wholly within twelve months after the end of the reporting period in which the employees render the related service, they are discounted. The rate used to discount reflects the time value of money. The currency and term of the financial instrument selected to reflect the time value of money is consistent with the currency and estimated term of the obligation.

Post-employment benefits: Defined benefit plans

Defined benefit plans are post-employment benefit plans other than defined contribution plans.

Actuarial gains and losses comprise experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred) and the effects of changes in actuarial assumptions. In measuring its defined benefit liability, the entity recognises actuarial gains and losses in surplus or deficit in the reporting period in which they occur.

Assets held by a long-term employee benefit fund are assets (other than non-transferable financial instruments issued by the reporting entity) that are held by an entity (a fund) that is legally separate from the reporting entity and exists solely to pay or fund employee benefits and are available to be used only to pay or fund employee benefits, are not available to the reporting entity's own creditors (even in liquidation), and cannot be returned to the reporting entity, unless either:

- the remaining assets of the fund are sufficient to meet all the related employee benefit obligations of the plan or the reporting entity; or
- the assets are returned to the reporting entity to reimburse it for employee benefits already paid.

Current service cost is the increase in the present value of the defined benefit obligation resulting from employee service in the current period.

Interest cost is the increase during a period in the present value of a defined benefit obligation which arises because the benefits are one period closer to settlement.

Past service cost is the change in the present value of the defined benefit obligation for employee service in prior periods, resulting in the current period from the introduction of, or changes to, post-employment benefits or other long-term employee benefits. Past service cost may be either positive (when benefits are introduced or changed so that the present value of the defined benefit obligation increases) or negative (when existing benefits are changed so that the present value of the defined benefit obligation decreases). In measuring its defined benefit liability, the entity recognises past service cost as an expense in the reporting period in which the plan is amended.

Plan assets comprise assets held by a long-term employee benefit fund and qualifying insurance policies.

The present value of a defined benefit obligation is the present value, without deducting any plan assets, of expected future payments required to settle the obligation resulting from employee service in the current and prior periods.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.15 Employee benefits (continued)

The return on plan assets is interest, dividends or similar distributions and other revenue derived from the plan assets, together with realised and unrealised gains or losses on the plan assets, less any costs of administering the plan (other than those included in the actuarial assumptions used to measure the defined benefit obligation) and less any tax payable by the plan itself.

The entity account not only for its legal obligation under the formal terms of a defined benefit plan, but also for any constructive obligation that arises from the entity's informal practices. Informal practices give rise to a constructive obligation where the entity has no realistic alternative but to pay employee benefits. An example of a constructive obligation is where a change in the entity's informal practices would cause unacceptable damage to its relationship with employees.

The amount recognised as a defined benefit liability is the net total of the following amounts:

- the present value of the defined benefit obligation at the reporting date;
- minus the fair value at the reporting date of plan assets (if any) out of which the obligations are to be settled directly;
- plus any liability that may arise as a result of a minimum funding requirement.

The amount determined as a defined benefit liability may be negative (an asset). The entity measures the resulting asset at the lower of:

- the amount determined above; and
- the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. The present value of these economic benefits is determined using a discount rate which reflects the time value of money.

Any adjustments arising from the limit above is recognised in surplus or deficit.

The entity determines the present value of defined benefit obligations and the fair value of any plan assets with sufficient regularity such that the amounts recognised in the annual financial statements do not differ materially from the amounts that would be determined at the reporting date.

The entity recognises the net total of the following amounts in surplus or deficit, except to the extent that another Standard requires or permits their inclusion in the cost of an asset:

- current service cost;
- interest cost;
- the expected return on any plan assets and on any reimbursement rights;
- actuarial gains and losses;
- past service cost;
- the effect of any curtailments or settlements; and
- the effect of applying the limit on a defined benefit asset (negative defined benefit liability).

The entity uses the Projected Unit Credit Method to determine the present value of its defined benefit obligations and the related current service cost and, where applicable, past service cost. The Projected Unit Credit Method (sometimes known as the accrued benefit method pro-rated on service or as the benefit/years of service method) sees each period of service as giving rise to an additional unit of benefit entitlement and measures each unit separately to build up the final obligation.

Actuarial valuations for GRAP 25 purposes are conducted on an annual basis by independent actuaries separately for each plan. The results of the valuation are updated for any material transactions and other material changes in circumstances (including changes in market prices and interest rates) up to the reporting date.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.15 Employee benefits (continued)

The entity recognises gains or losses on the curtailment or settlement of a defined benefit plan when the curtailment or settlement occurs. The gain or loss on a curtailment or settlement comprises:

- any resulting change in the present value of the defined benefit obligation; and
- any resulting change in the fair value of the plan assets.

Before determining the effect of a curtailment or settlement, the entity re-measure the obligation (and the related plan assets, if any) using current actuarial assumptions (including current market interest rates and other current market prices).

When it is virtually certain that another party will reimburse some or all of the expenditure required to settle a defined benefit obligation, the right to reimbursement is recognised as a separate asset. The asset is measured at fair value. In all other respects, the asset is treated in the same way as plan assets. In surplus or deficit, the expense relating to a defined benefit plan is not presented as the net of the amount recognised for a reimbursement.

The entity offsets an asset relating to one plan against a liability relating to another plan when the entity has a legally enforceable right to use a surplus in one plan to settle obligations under the other plan and intends either to settle the obligations on a net basis, or to realise the surplus in one plan and settle its obligation under the other plan simultaneously.

Actuarial assumptions

Actuarial assumptions are unbiased and mutually compatible.

Financial assumptions are based on market expectations, at the reporting date, for the period over which the obligations are to be settled.

The rate used to discount post-employment benefit obligations (both funded and unfunded) reflect the time value of money. The currency and term of the financial instrument selected to reflect the time value of money is consistent with the currency and estimated term of the post-employment benefit obligations.

Post-employment benefit obligations are measured on a basis that reflects:

- estimated future salary increases;
- the benefits set out in the terms of the plan (or resulting from any constructive obligation that goes beyond those terms) at the reporting date; and
- estimated future changes in the level of any state benefits that affect the benefits payable under a defined benefit plan, if, and only if, either:
- those changes were enacted before the reporting date; or
- past history, or other reliable evidence, indicates that those state benefits will change in some predictable manner, for example, in line with future changes in general price levels or general salary levels.

Assumptions about medical costs take account of estimated future changes in the cost of medical services, resulting from both inflation and specific changes in medical costs.

Post retirement medical aid obligations

The SAMRC provides post-retirement health care benefits, to some of its employees and their legitimate spouses. The major portion of the liability is funded by an investment policy.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.15 Employee benefits (continued)

The entitlement to post-retirement health care benefits is based on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment. Independent qualified actuaries carry out valuations of these obligations.

The amount recognised as a liability for other long-term employee benefits is the net total of the following amounts:

- the present value of the defined benefit obligation at the reporting date;
- minus the fair value at the reporting date of plan assets (if any) out of which the obligations are to be settled directly.

The entity shall recognise the net total of the following amounts as expense or revenue, except to the extent that another Standard requires or permits their inclusion in the cost of an asset:

- current service cost;
- interest cost;
- the expected return on any plan assets and on any reimbursement right recognised as an asset;
- actuarial gains and losses, which shall all be recognised immediately;
- past service cost, which shall all be recognised immediately; and
- the effect of any curtailments or settlements.

Termination benefits

The entity recognises termination benefits as a liability and an expense when the entity is demonstrably committed to either:

- terminate the employment of an employee or group of employees before the normal retirement date; or
- provide termination benefits as a result of an offer made in order to encourage voluntary redundancy.

The entity is demonstrably committed to a termination when the entity has a detailed formal plan for the termination and is without realistic possibility of withdrawal. The detailed plan includes [as a minimum]:

- the location, function, and approximate number of employees whose services are to be terminated;
- the termination benefits for each job classification or function; and
- the time at which the plan will be implemented.

Termination benefits are payable whenever an employee's employment is terminated before normal retirement date or whenever an employee accepts voluntary redundancy in exchange for these benefits. The SAMRC recognises termination benefits as an expense when it is demonstrably committed to either terminate the employment of current employees according to a detailed formal plan without the possibility of withdrawal or to provide termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than 12 months after reporting date are discounted to present value.

Pension Plan

Contributions to a pension plan in respect of service in a particular period are included in the total cost of employment and are charged to the statement of financial performance in the year in which they relate as part of the cost of employment. The amount recognised in the surplus or deficit for the period under defined benefit plans represents the movement in the present value of the defined benefit obligation and the fair value of the plan assets, after adjusting for contributions paid to the fund, as well as any unrecognised past service costs. Actuarial gains or losses are recognised in the surplus or deficit in the period in which it occurs.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.16 Provisions and contingencies

Provisions are recognised when:

- the entity has a present obligation as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation; and
- a reliable estimate can be made of the obligation.

The amount of a provision is the best estimate of the expenditure expected to be required to settle the present obligation at the reporting date.

Provisions are measured at the present value of the expenditures expected to be made to settle the obligation using the pre-tax rate that reflects the current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognised as finance charges.

Where some or all of the expenditure required to settle a provision is expected to be reimbursed by another party, the reimbursement is recognised when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement is treated as a separate asset. The amount recognised for the reimbursement does not exceed the amount of the provision.

Provisions are reviewed at each reporting date and adjusted to reflect the current best estimate. Provisions are reversed if it is no longer probable that an outflow of resources embodying economic benefits or service potential will be required, to settle the obligation.

A provision is used only for expenditures for which the provision was originally recognised.

Provisions are not recognised for future operating deficits.

A constructive obligation to restructure arises only when an entity:

- has a detailed formal plan for the restructuring, identifying at least:
  - the activity/operating unit or part of an activity/operating unit concerned;
  - the principal locations affected;
  - the location, function, and approximate number of employees who will be compensated for services being terminated;
  - the expenditures that will be undertaken; and
  - when the plan will be implemented; and
- has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement that plan or announcing its main features to those affected by it.

Contingent assets and contingent liabilities are not recognised. Contingencies are disclosed in note 43.

1.17 Commitments

Items are classified as commitments when an entity has committed itself to future transactions that will normally result in the outflow of cash.

Commitments for which disclosure is necessary to achieve a fair presentation is disclosed in a note to the financial statements, if both the following criteria are met:

- Contracts should be non-cancellable or only cancellable at significant cost (for example, contracts for computer or building maintenance services); and
- Contracts should relate to something other than the routine, steady, state business of the entity – therefore salary commitments relating to employment contracts commitments are excluded.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.18 Revenue from exchange transactions

Revenue is the gross inflow of economic benefits or service potential during the reporting period when those inflows result in an increase in net assets, other than increases relating to contributions from owners.

An exchange transaction is one in which the entity receives assets or services, or has liabilities extinguished, and directly gives approximately equal value (primarily in the form of goods, services or use of assets) to the other party in exchange.

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

Measurement

Revenue is measured at the fair value of the consideration received or receivable.

Sale of goods

Revenue from the sale of goods is recognised when all the following conditions have been satisfied:

- the entity has transferred to the purchaser the significant risks and rewards of ownership of the goods;
- the entity retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits or service potential associated with the transaction will flow to the entity; and
- the costs incurred or to be incurred in respect of the transaction can be measured reliably.

Revenue derived from the sale of animal blood; dietary assessment kits and nutritional textbooks and sale of biological assets are classified as sale of goods.

Rendering of services

When the outcome of a transaction involving the rendering of services can be estimated reliably, revenue associated with the transaction is recognised by reference to the stage of completion of the transaction at the reporting date. The outcome of a transaction can be estimated reliably when all the following conditions are satisfied:

- the amount of revenue can be measured reliably;
- it is probable that the economic benefits or service potential associated with the transaction will flow to the entity;
- the stage of completion of the transaction at the reporting date can be measured reliably; and
- the costs incurred for the transaction and the costs to complete the transaction can be measured reliably.

When services are performed by an indeterminate number of acts over a specified time frame, revenue is recognised on a straight line basis over the specified time frame unless there is evidence that some other method better represents the stage of completion. When a specific act is much more significant than any other acts, the recognition of revenue is postponed until the significant act is executed.

When the outcome of the transaction involving the rendering of services cannot be estimated reliably, revenue is recognised only to the extent of the expenses recognised that are recoverable.

Consulting and research service revenue is recognised by reference to the stage of completion of the transaction at the reporting date. Stage of completion is determined by the proportion that costs incurred to date bear to the total estimated costs of the transaction.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.18 Revenue from exchange transactions (continued)

Interest, royalties and dividends

Revenue arising from the use by others of entity assets yielding interest, royalties and dividends or similar distributions is recognised when:

- It is probable that the economic benefits or service potential associated with the transaction will flow to the entity, and
- The amount of the revenue can be measured reliably.

Interest is recognised, in surplus or deficit, using the effective interest rate method.

Royalties are recognised as they are earned in accordance with the substance of the relevant agreements.

Dividends or their equivalent distributions are recognised, in surplus or deficit, when the entity's right to receive payment has been established.

Service fees included in the price of the product are recognised as revenue over the period during which the service is performed.

1.19 Revenue from non-exchange transactions

Revenue comprises gross inflows of economic benefits or service potential received and receivable by an entity, which represents an increase in net assets, other than increases relating to contributions from owners.

Conditions on transferred assets are stipulations that specify that the future economic benefits or service potential embodied in the asset is required to be consumed by the recipient as specified or future economic benefits or service potential must be returned to the transferor.

Control of an asset arise when the entity can use or otherwise benefit from the asset in pursuit of its objectives and can exclude or otherwise regulate the access of others to that benefit.

Exchange transactions are transactions in which one entity receives assets or services, or has liabilities extinguished, and directly gives approximately equal value (primarily in the form of cash, goods, services, or use of assets) to another entity in exchange.

Non-exchange transactions are transactions that are not exchange transactions. In a non-exchange transaction, an entity either receives value from another entity without directly giving approximately equal value in exchange, or gives value to another entity without directly receiving approximately equal value in exchange.

Stipulations on transferred assets are terms in laws or regulation, or a binding arrangement, imposed upon the use of a transferred asset by entities external to the reporting entity.

Recognition

An inflow of resources from a non-exchange transaction recognised as an asset is recognised as revenue, except to the extent that a liability is also recognised in respect of the same inflow.

As the entity satisfies a present obligation recognised as a liability in respect of an inflow of resources from a non-exchange transaction recognised as an asset, it reduces the carrying amount of the liability recognised and recognises an amount of revenue equal to that reduction.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.19 Revenue from non-exchange transactions (continued)

Measurement

Revenue from a non-exchange transaction is measured at the amount of the increase in net assets recognised by the entity.

When, as a result of a non-exchange transaction, the entity recognises an asset, it also recognises revenue equivalent to the amount of the asset measured at its fair value as at the date of acquisition, unless it is also required to recognise a liability. Where a liability is required to be recognised it will be measured as the best estimate of the amount required to settle the obligation at the reporting date, and the amount of the increase in net assets, if any, recognised as revenue. When a liability is subsequently reduced, because the taxable event occurs or a condition is satisfied, the amount of the reduction in the liability is recognised as revenue.

Gifts and donations, including goods in-kind

Gifts and donations, including goods in-kind, are recognised as assets and revenue when it is probable that the future economic benefits or service potential will flow to the entity and the fair value of the assets can be measured reliably.

Services in-kind

The entity recognise services in-kind that are significant to its operations and/or service delivery objectives as assets and recognise the related revenue when it is probable that the future economic benefits or service potential will flow to the entity and the fair value of the assets can be measured reliably.

Where services in-kind are not significant to the entity's operations and/or service delivery objectives and/or do not satisfy the criteria for recognition, the entity has not disclosed the nature and type of services in-kind received during the reporting period.

1.20 Revenue recognition for exchange and non-exchange transactions

Revenue represents the parliamentary grant from government as well as external income.

Parliamentary grant (Revenue from non-exchange transactions)

Government grants are recognised when it is probable that the future economic benefit will flow to the SAMRC and these benefits can be measured reliably. The grant is recognised to the extent that there are no further obligations arising from the receipt of the grant. Government grants are assistance by government in the form of transfer of resources in return for compliance with conditions related to operating activities. Grants that compensate the SAMRC for expenses incurred are recognised in surplus or deficit in the same periods in which the expense is recognised.

Revenue other than grants, donations, project revenue and council activities (Revenue from exchange transactions)

Revenue is recognised on the accrual basis. Revenue is recognised when significant risks and rewards of ownership have been transferred.

Research revenue

Revenue is recognised only to the extent of research costs incurred and is probable that it will be recoverable. Advance income received in respect of which no work has been done, is treated as deferred income until such time the expenditure is incurred or the conditions of the grant/contract are met.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.20 Revenue recognition for exchange and non-exchange transactions (continued)

Rental income

Rental income from tenants is recognised in the statement of financial performance on a straight line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income, over the term of the lease.

Deferred income

Deferred income is recognised as revenue to the extent that expenses are incurred and that conditions of the grant are met.

Social outcomes based contracts

Income received from the social investor is recognised in the statement of financial performance when all the contractual commitments are met.

A liability will be recognised once the social outcomes have been verified by the verification agent.

1.21 Borrowing costs

Borrowing costs are interest and other expenses incurred by an entity in connection with the borrowing of funds.

Borrowing costs are recognised as an expense in the period in which they are incurred.

1.22 Accounting by principals and agents

Identification

An agent is an entity that has been directed by another entity (a principal), through a binding arrangement, to undertake transactions with third parties on behalf of the principal and for the benefit of the principal.

A principal is an entity that directs another entity (an agent), through a binding arrangement, to undertake transactions with third parties on its behalf and for its own benefit.

A principal-agent arrangement results from a binding arrangement in which one entity (an agent), undertakes transactions with third parties on behalf, and for the benefit of, another entity (the principal).

Identifying whether an entity is a principal or an agent

When the entity is party to a principal-agent arrangement, it assesses whether it is the principal or the agent in accounting for revenue, expenses, assets and/or liabilities that result from transactions with third parties undertaken in terms of the arrangement.

The assessment of whether an entity is a principal or an agent requires the entity to assess whether the transactions it undertakes with third parties are for the benefit of another entity or for its own benefit.

Binding arrangement

The entity assesses whether it is an agent or a principal by assessing the rights and obligations of the various parties established in the binding arrangement.

Where the terms of a binding arrangement are modified, the parties to the arrangement re-assess whether they act as a principal or an agent.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.22 Accounting by principals and agents (continued)

Recognition

The entity, as an agent, recognises only that portion of the revenue and expenses it receives or incurs in executing the transactions on behalf of the principal in accordance with the requirements of the relevant Standards of GRAP.

The entity recognises assets and liabilities arising from principal-agent arrangements in accordance with the requirements of the relevant Standards of GRAP.

1.23 Translation of foreign currencies

Foreign currency transactions

A foreign currency transaction is recorded, on initial recognition in Rand's, by applying to the foreign currency amount the spot exchange rate between the functional currency and the foreign currency at the date of the transaction.

At each reporting date:

- foreign currency monetary items are translated using the closing rate;
- non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction; and
- non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous annual financial statements are recognised in surplus or deficit in the period in which they arise.

When a gain or loss on a non-monetary item is recognised directly in net assets, any exchange component of that gain or loss is recognised directly in net assets. When a gain or loss on a non-monetary item is recognised in surplus or deficit, any exchange component of that gain or loss is recognised in surplus or deficit.

Cash flows arising from transactions in a foreign currency are recorded in Rands by applying to the foreign currency amount the exchange rate between the Rand and the foreign currency at the date of the cash flow.

1.24 VAT

The SAMRC accounts for VAT on the invoice basis.

The net amount of VAT recoverable, or payable to SARS is reflected on the Statement of Financial Position.

1.25 Comparative figures

Where necessary, comparative figures have been reclassified to conform to changes in presentation in the current year.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.26 Fruitless and wasteful expenditure

Fruitless and wasteful expenditure means expenditure which was made in vain and would have been avoided had reasonable care been exercised.

National Treasury instruction note no. 4 of 2022/2023 which was issued in terms of sections 76(2)(e) to 76(4)(a) and (c) of the PFMA (effective from 3 January 2023).

All expenditure relating to fruitless and wasteful expenditure is recognised as an expense in the statement of financial performance in the year that the expenditure was incurred. The expenditure is classified in accordance with the nature of the expense and where recovered, it is subsequently accounted for as revenue in the statement of financial performance. The entity records the details of all alleged fruitless and wasteful expenditure in the register; investigates the incidents and where appropriate raise a debt. Fruitless and wasteful expenditure is reported monthly to National Treasury and quarterly to the Accounting Authority.

1.27 Irregular expenditure

Irregular expenditure as defined in section 1 of the PFMA is expenditure other than unauthorised expenditure, incurred in contravention of or that is not in accordance with a requirement of any applicable legislation, including –

(a) this Act; or

(b) the State Tender Board Act, 1968 (Act No. 86 of 1968), or any regulations made in terms of the Act; or

(c) any provincial legislation providing for procurement procedures in that provincial government.

National Treasury practice note no. 4 of 2008/2009 and instruction note no. 4 of 2022/2023 which was issued in terms of sections 76(1)(b), (e) and (f), 76(2)(e) and 76(4)(a) and (c) of the PFMA requires the following:

Irregular expenditure that was incurred and identified during the current financial year and which was condoned before year end and/or before finalisation of the financial statements is recorded appropriately in the irregular expenditure register. In such an instance, no further action is required with the exception of updating the note to the annual report.

Irregular expenditure that was incurred and confirmed during the current financial year is recorded in the annual financial statements.

The Accounting Authority may condone irregular expenditure emanating from non-compliance with sections 44 and 56 of the PFMA and in a case where an employee of an entity listed in Schedule 3A to the PFMA, was responsible for exceeding the budget of the public entity.

Irregular expenditure that was identified and confirmed during the current financial year and which was not condoned must be recorded appropriately in the irregular expenditure register. If liability for the irregular expenditure can be attributed to a person, a debt account must be created if such a person is liable in law. Immediate steps will be taken to recover the amount from the person concerned. If recovery is not possible, the accounting authority may write off the amount as debt impairment and disclose such in the annual report. The irregular expenditure register will be updated accordingly.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.28 Budget information

General purpose financial reporting by entity shall provide information on whether resources were obtained and used in accordance with the legally adopted budget.

The approved budget is prepared on an accrual basis and presented by functional classification linked to performance outcome objectives.

The approved budget covers the fiscal period from 01-Apr-23 to 31-Mar-24.

The annual financial statements and the budget are on the same basis of accounting therefore a comparison with the budgeted amounts for the reporting period have been included in the Statement of comparison of budget and actual amounts.

The Statement of comparative and actual information has been included in the annual financial statements as the recommended disclosure when the annual financial statements and the budget are on the same basis of accounting as determined by National Treasury. The Statement of comparison of budget and actual amounts is presented for the revenue and expenses as this is the information submitted to the Executive Authority. The Annual Performance Plan (APP) on the SAMRC intranet reflect the 2023/2024 approved budget.

Comparative information is not required.

1.29 Related parties

The entity operates in a sector currently dominated by entities directly or indirectly owned by the South African Government. As a consequence of the constitutional independence of the three spheres of government in South Africa, only entities within the national sphere of government and are in the same economic entity (having the same executive authority) are considered to be related parties.

Management are those persons responsible for planning, directing and controlling the activities of the entity, including those charged with the governance of the entity in accordance with legislation, in instances where they are required to perform such functions.

Close members of the family of a person is considered to be those family members who may be expected to influence, or be influenced by, that management in their dealings with the entity.

Transactions with related parties are disclosed.

Where those charged with governance are employed by an entity receiving funding or doing business with SAMRC which do not meet the definition of a related party in terms of GRAP 20 these relationships are separately disclosed in the Annual Report.

1.30 Living and non-living resources

Living resources are those resources that undergo biological transformation.

Non-living resources are those resources, other than living resources, that occur naturally and have not been extracted.

Agricultural activity is the management by an entity of the biological transformation and harvest of biological assets for:

(a) sale;

(b) distribution at no charge or for a nominal charge; or

(c) conversion into agriculture produce or into additional biological assets for sale or distribution at no charge or for a nominal charge.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.30 Living and non-living resources (continued)

Biological transformation (for purposes of this Standard) comprises the processes of growth, degeneration, production, and procreation that cause qualitative or quantitative changes in a living resource.

Carrying amount is the amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses.

Cost is the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or development and, where applicable, the amount attributed to the asset when initially recognised in accordance with the specific requirements of other Standards of GRAP.

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

Depreciable amount is the cost of an asset, or other amount substituted for cost, less its residual value.

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

Group of resources means a grouping of living or non-living resources of a similar nature or function in an entity's operations that is shown as a single item for the purpose of disclosure in the annual financial statements.

The residual value of an asset is the estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset was already of the age and in the condition expected at the end of its useful life.

Useful life is the period over which an asset is expected to be available for use by an entity, or the number of production or similar units expected to be obtained from the asset by an entity.

Recognition

A living resource is recognised as an asset if it is probable that future economic benefits or service potential associated with the asset will flow to the entity, and the cost or fair value of the asset can be measured reliably.

Where the entity holds a living resource that meets the definition of an asset, but which does not meet the recognition criteria, relevant information is disclosed in the notes to the annual financial statements. When the information about the cost or fair value of the living resource becomes available, the entity recognises, from that date, the living resource and apply the measurement principles.

Measurement at recognition

A living resource that qualifies for recognition as an asset is measured at its cost.

Where a living resource is acquired through a non-exchange transaction, its cost is measured at its fair value as at the date of acquisition.

The cost of a living resource comprises its purchase price, including import duties and non-refundable purchase taxes, and any costs directly attributable to bringing the living resource to the location and condition necessary for it to be capable of operating in the manner intended by management.

Measurement after recognition

Cost model

After recognition as an asset, a group of living resources are carried at its cost less any accumulated depreciation and any accumulated impairment losses.

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.30 Living and non-living resources (continued)

Depreciation

Living resources are depreciated and the depreciation charge for each period is recognised in surplus or deficit unless it is included in the carrying amount of another asset, where appropriate.

The depreciable amount of a living resource is allocated on a systematic basis over its useful life.

The entity assesses at each reporting date whether there is any indication that the entity's expectations about the residual value and the useful life of a living resource have changed since the preceding reporting date. If any such indication exists, the entity revises the expected useful life and/or residual value accordingly. The change(s) is accounted for as a change in an accounting estimate.

In assessing whether there is any indication that the expected useful life of the living resource has changed, the entity considers the following indications:

(a) The use of the living resource has changed, because of the following:
- The entity has changed the manner in which the living resource is used.
- The entity has made a decision to dispose of the living resource in a future reporting period(s) such that this decision changes the expected period over which the living resource will be used.
- Legislation, government policy or similar means have been amended or implemented during the reporting period that have, or will, change the use of the living resource.
- The living resource was idle or retired from use during the reporting period.

(b) The living resource is approaching the end of its previously expected useful life.

(c) There is evidence that the condition of the living resource improved or declined based on assessments undertaken during the reporting period.

(d) The living resource is assessed as being impaired.

In assessing whether there is any indication that the expected residual value of the living resource has changed, the entity considers whether there has been any change in the expected timing of disposal of the living resource, as well as any relevant indicators as noted above.

The depreciation method used reflects the pattern in which the future economic benefits or service potential of the living resource is expected to be consumed by the entity.

The depreciation method applied to a living resource is reviewed at least at each reporting date and, if there has been a significant change in the expected pattern of consumption of the future economic benefits or service potential embodied in the living resource, the method is changed to reflect the changed pattern. Such a change is accounted for as a change in an accounting estimate.

The useful lives of items of property, plant and equipment have been assessed as follows:

ITEM	DEPRECIATION METHOD	AVERAGE USEFUL LIFE
Rhesus monkeys	Straight-line	25 years
Vervet monkeys	Straight-line	30 years

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

1.30 Living and non-living resources (continued)

Impairment

The entity assesses at each reporting date whether there is an indication that the living resource may be impaired. If any such indication exists, the entity estimates the recoverable amount or the recoverable service amount of the living resource.

Transfers

Transfers from living resources are made when the particular asset no longer meets the definition of a living resource and/or is no longer within the scope of this accounting policy.

Transfers to living resources are made when the asset meets the definition of a living resource.

Derecognition

The carrying amount of a living resource is derecognised on disposal, or when no future economic benefits or service potential are expected from its use or disposal.

The gain or loss arising from the derecognition of a living resource is included in surplus or deficit when the item is derecognised.

1.31 Earmarked funds

The Earmarked funds are donations; bequests from deceased estates or cash received for a limited period to be used for visiting eminent scientists; cancer research or tuberculosis research. The monies received have been allocated to a separate account. The monies are ring-fenced from the cash balance of the SAMRC.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS

2. New standards and interpretations

2.1 Standards and interpretations effective and adopted in the current year

In the current year, the entity has adopted the following standards and interpretations that are effective for the current financial year and that are relevant to its operations:

STANDARD/INTERPRETATION:	EFFECTIVE DATE: YEARS BEGINNING ON OR AFTER	EXPECTED IMPACT:
iGRAP 21: The Effect of Past Decisions on Materiality	1 April, 2023	The adoption of this standard has not had a material impact on the results of the entity, but has resulted in more disclosure than would have previously been provided in the financial statements
GRAP 25 (as revised): Employee Benefits	1 April, 2023	The adoption of this standard has not had a material impact on the results of the entity, but has resulted in more disclosure than would have previously been provided in the financial statements
iGRAP 7 (as revised): Limit on defined benefit asset, minimum funding requirements and their interaction	1 April, 2023	The adoption of this standard has not had a material impact on the results of the entity, but has resulted in more disclosure than would have previously been provided in the financial statements
Improvements to the Standards of GRAP (2020)	1 April, 2023	The impact of the standard is not material.
GRAP 1 (amended): Presentation of Financial Statements (Materiality)	1 April, 2023	The adoption of this standard has not had a material impact on the results of the entity, but has resulted in more disclosure than would have previously been provided in the financial statements

The following standards and interpretations have been published and are mandatory for the entity's accounting periods beginning on or after 1 April, 2024 or later periods but are not relevant to its operations:

STANDARD/INTERPRETATION:	EFFECTIVE DATE: YEARS BEGINNING ON OR AFTER	EXPECTED IMPACT:
GRAP 106 Transfer of Functions Between Entities Not Under Common Control	Undetermined	Unlikely there will be a material impact
GRAP 105 Transfer of Functions Between Entities Under Common Control	Undetermined	Unlikely there will be a material impact
GRAP 2023 Improvements to the Standards of GRAP 2023	Undetermined	Impact is currently being assessed
GRAP 1 (amended): Presentation of Financial Statements (Going Concern)	Undetermined	Unable to reliably estimate the impact
GRAP 103 (as revised): Heritage Assets	Undetermined	Unlikely there will be a material impact
iGRAP 22 Foreign Currency Transactions and Advance Consideration	1 April, 2025	Unable to reliably estimate the impact
GRAP 104 (as revised): Financial Instruments	1 April, 2025	Unable to reliably estimate the impact
Guideline on The Application of Materiality to Financial Statements	Undetermined	Unable to reliably estimate the impact

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
3. Financial assets at fair value		
Designated at fair value		
Class 1 Listed shares	982,286	809,814
Sanlam demutualisation shares No. of shares 12715 (2023: 12715); Old Mutual demutualisation shares No. of shares 3682 (2023: 3682); Quilter shares No. of shares 924 (2023: 924) and Nedbank Ltd shares No. of shares 145 (2023: 150)		
Class 2 Unit trusts	8,568,728	8,339,199
SIM General Equity Fund R – 18492,97 units (2023: 18098,19 units) and SIM Balanced Fund R – 32398,67 (2023: 31602,34)		
	9,551,014	**9,149,013**
Current assets		
Designated at fair value	9,551,014	9,149,013

Financial assets at fair value

Fair value hierarchy of financial assets at fair value

For financial assets recognised at fair value, disclosure is required of a fair value hierarchy which reflects the significance of the inputs used to make the measurements. The fair value hierarchy has the following levels:

Level 1 represents those assets which are measured using unadjusted quoted prices in active markets for identical assets. Quoted selling price per share at 31 March 2024 (31 March 2023) is used.

Level 2 applies inputs other than quoted prices that are observable for the assets either directly (i.e. as prices) or indirectly (i.e. derived from prices). The valuation certificate received from Sanlam indicating the unit balance and price per unit and market value.

Level 3 applies inputs which are not based on observable market data.

Level 1		
Class 1 Listed shares	982,286	809,814
Class 2 Unit trusts	8,568,728	8,339,199
	9,551,014	**9,149,013**

The entity has not reclassified any financial assets from cost or amortised cost to fair value, or from fair value to cost or amortised cost during the current or prior period.

The number of Nedbank shares was reduced by 5 shares due to the odd lot buy back of Nedbank shares for shareholding of less than 100 shares in July 2023.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

3. Financial assets at fair value (continued)

Reconciliation of financial assets at fair value through surplus or deficit measured in level 1

Reconciliation of financial assets at fair value through surplus or deficit measured in level 1 – 31 March 2024

	OPENING BALANCE	GAINS OR LOSSES IN SURPLUS OR DEFICIT	PURCHASES	SALES	CLOSING BALANCE
Class 1 Listed shares	809,814	173,642	–	(1,170)	982,286
Class 2 Unit trusts	8,339,199	37,789	191,740	–	8,568,728
	9,149,013	**211,431**	**191,740**	**(1,170)**	**9,551,014**

Reconciliation of financial assets at fair value through surplus or deficit measured in level 1 – 31 March 2023

	OPENING BALANCE	GAINS OR LOSSES IN SURPLUS OR DEFICIT	PURCHASES	SALES	CLOSING BALANCE
Class 1 Listed shares	1,033,443	(219,299)	–	(4,330)	809,814
Class 2 Unit trusts	8,261,343	(148,165)	226,021	–	8,339,199
	9,294,786	**(367,464)**	**226,021**	**(4,330)**	**9,149,013**

4. Receivables from exchange transactions

	2024 31 MARCH R	2023 31 MARCH R
Trade and research grant debtors	80,582,877	111,904,934
Employee costs in advance	179,141	225,864
Deposits	7,454,795	546,661
	88,216,813	**112,677,459**

The decrease in receivables from exchange transactions is attributed to lower funder/grantor debtors. There is a decrease in employee costs in advance and an increase in deposits.

Credit quality of trade debtors

The credit quality of research grant debtors that are neither past nor due nor impaired can be assessed by reference to historical information about the specific debtor.

Trade and other receivables

Trade and research grant receivables which are less than one month past due are not considered to be impaired. At 31 March 2024: R19,487,539 (31 March 2023: R6,856,561) were past due but not impaired as the debtors paid subsequent to the reporting date or there is a firm commitment to settle the debt.

The ageing of amounts past due but not impaired is as follows:

1 month past due	2,706,521	6,856,561
2 months past due	9,139,800	–
3 months past due	7,641,218	–

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
4. Receivables from exchange transactions (continued)		
Trade and other receivables impaired		
The amount of the provision was R489,484 as of 31 March 2024 (31 March 2023: R626,312). All debtor balances are reviewed for impairment. Impairment considerations include solvency of debtor and recoverability of amount owed.		
Employee costs in advance are not considered for impairment as these amounts are recovered/processed within 30 days.		
Aged as follows:		
More than 3 months past due	489,484	626,312
The carrying amount of trade debtors are denominated in the following currencies:		
Rand	68,698,434	104,469,514
US Dollar	11,414,113	7,435,420
Pound sterling	470,330	–
	80,582,877	**111,904,934**
Reconciliation of provision for impairment of trade and other receivables		
Opening balance	626,312	394,366
Provision for impairment	489,484	626,312
Unused amounts reversed	(626,312)	(394,366)
	489,484	**626,312**

5. Receivables from non-exchange transactions

Research grant debtors	9,055,438	5,517,069

At 31 March 2024 there were funder/grantor non-exchange debtors and accrued income (31 March 2023 there were funder/grantor non-exchange debtors and accrued income).

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
5. Receivables from non-exchange transactions (continued)		
Receivables from non-exchange transactions past due but not impaired		
Research grant receivables from non-exchange transactions which are less than one month past due are not considered to be impaired. At 31 March 2024: R Nil (31 March 2023: RNil) were past due but not impaired.		
Receivables from non-exchange transactions impaired		
The amount of the provision was RNil as at 31 March 2024 (31 March 2023: R Nil), the amounts owing are considered fully recoverable.		
The carrying amount of other receivables from non-exchange transactions are denominated in the following currencies:		
Rand	9,055,438	2,008,529
Pound sterling	–	3,508,540
	9,055,438	**5,517,069**
6. VAT receivable		
VAT	25,439,861	16,208,647

7. Prepayments

Prepayments – other relate to expenditure paid in advance for subscriptions; membership fees; annual computer licenses; computer software updates and maintenance; computer warranties; insurance; conference registrations and equipment maintenance.

Subsistence and travel advances	274,614	361,605
Prepayments – other	15,096,316	10,657,934
	15,370,930	**11,019,539**

The increase in prepayments – other is mainly as a result of an increase in computer software updates and maintenance; computer warranties and equipment maintenance contracts paid during the period under review.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
8. Cash and cash equivalents		
Cash and cash equivalents consist of:		
Cash on hand	36,485	35,203
Bank balances	522,046,127	719,649,165
	522,082,612	**719,684,368**
Analysis of bank balances		
ABSA and Standard Bank	5,147,192	9,410,213
ABSA funder accounts	12,573,776	13,427,279
First National Bank	543,393	112,792
Cash at the Reserve Bank	503,781,766	696,698,881
	522,046,127	**719,649,165**

The cash at the Reserve Bank includes funds for the Botha Trust; Bruhns Trust; Melville Douglas Trust; Q&S Abdool Karim Trust; FJ Kleynhans Trust and Motor vehicle reserve fund (refer note 18).

The Motor vehicle reserve fund was established to provide self-insurance of motor vehicles with a low market value.

Motor vehicle reserve fund		
Balance at beginning of year	4,854,812	4,609,242
Allocation for the year	240,270	245,570
	5,095,082	**4,854,812**

9. Biological assets that form part of an agricultural activity

	31 MARCH 2024			31 MARCH 2023		
	COST/ VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE	COST/ VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE
Bearer mature biological assets	25,000	-	25,000	25,000	-	25,000

Reconciliation of biological assets that form part of an agricultural activity – 31 March 2024

	OPENING BALANCE	TOTAL
Bearer mature biological assets	25,000	25,000

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

9. Biological assets that form part of an agricultural activity (continued)

Reconciliation of biological assets that form part of an agricultural activity – 31 March 2023

	OPENING BALANCE	DISPOSALS	TOTAL
Bearer mature biological assets	50,000	(25,000)	25,000

Methods and assumptions used in determining fair value

SAMRC holds horses as biological assets, horse blood is sold to laboratories when required.

All activities are monitored and controlled to ensure humane treatment of animals.

The last selling price per biological animal type is used to determine fair value.

	31 MARCH 2024 R	31 MARCH 2023 R
Fair value less cost to sell of biological assets during the period	25,000	25,000

10. Property, plant and equipment

	31 MARCH 2024			31 MARCH 2023		
	COST/ VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE	COST/ VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE
Land	1,769,181	–	1,769,181	1,769,181	–	1,769,181
Buildings	196,829,639	(56,600,069)	140,229,570	192,865,534	(52,383,395)	140,482,139
Vehicles and containers	23,821,659	(14,925,034)	8,896,625	21,247,422	(13,892,295)	7,355,127
Furniture and office equipment	58,526,409	(27,165,370)	31,361,039	56,401,496	(26,508,378)	29,893,118
Computer equipment	106,345,287	(53,300,988)	53,044,299	84,118,622	(44,644,281)	39,474,341
Laboratory equipment	122,428,426	(47,297,140)	75,131,286	98,889,508	(42,186,818)	56,702,690
Total	**509,720,601**	**(199,288,601)**	**310,432,000**	**455,291,763**	**(179,615,167)**	**275,676,596**

Reconciliation of property, plant and equipment – 31 March 2024

	OPENING BALANCE	ADDITIONS	DISPOSALS	OTHER CHANGES, MOVEMENTS	DEPRE-CIATION	IMPAIRMENT LOSS	IMPAIRMENT REVERSAL	TOTAL
Land	1,769,181	–	–	–	–	–	–	1,769,181
Buildings	140,482,139	8,273,374	(1,818,739)	(1,624,273)	(5,243,497)	(18,070)	178,636	140,229,570
Vehicles and containers	7,355,127	2,873,296	(44,859)	–	(848,335)	(483,463)	44,859	8,896,625
Furniture and office equipment	29,893,118	5,311,141	(797,859)	–	(3,045,511)	(334,886)	335,036	31,361,039
Computer equipment	39,474,341	24,345,766	(565,296)	–	(10,232,416)	(197,538)	219,442	53,044,299
Laboratory equipment	56,702,690	28,403,167	(2,593,133)	–	(6,402,199)	(1,293,575)	314,336	75,131,286
	275,676,596	**69,206,744**	**(5,819,886)**	**(1,624,273)**	**(25,771,958)**	**(2,327,532)**	**1,092,309**	**310,432,000**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

10. Property, plant and equipment (continued)

Reconciliation of property, plant and equipment – 31 March 2023

	OPENING BALANCE	ADDITIONS	DISPOSALS	DEPRECIATION	IMPAIRMENT LOSS	IMPAIRMENT REVERSAL	TOTAL
Land	1,769,181	–	–	–	–	–	1,769,181
Buildings	129,078,121	16,781,950	(281,356)	(4,929,685)	(247,490)	80,599	140,482,139
Vehicles and containers	7,792,606	552,805	(257,478)	(915,292)	(60,714)	243,200	7,355,127
Furniture and office equipment	26,608,963	6,404,921	(298,493)	(2,764,215)	(642,679)	584,621	29,893,118
Computer equipment	38,034,545	8,420,800	(592,477)	(7,977,236)	(309,430)	1,898,139	39,474,341
Laboratory equipment	50,250,335	13,558,522	(1,010,213)	(5,801,551)	(1,313,208)	1,018,805	56,702,690
	253,533,751	**45,718,998**	**(2,440,017)**	**(22,387,979)**	**(2,573,521)**	**3,825,364**	**275,676,596**

IMPAIRED ASSETS 31 MARCH 2024	R
Property, plant and equipment – Laboratory equipment	5,119,613
Property, plant and equipment – Computer equipment	488,239
Property, plant and equipment – Furniture and office equipment	791,372
Property, plant and equipment – Buildings	96,015
Property, plant and equipment – Vehicles	627,782
	7,123,021

IMPAIRED ASSETS 31 MARCH 2023	R
Property, plant and equipment – Laboratory equipment	4,140,374
Property, plant and equipment – Computer equipment	510,144
Property, plant and equipment – Furniture and office equipment	791,522
Property, plant and equipment – Buildings	256,581
Property, plant and equipment – Vehicles	189,177
	5,887,798

During the period under review various intra-mural units and platforms identified items of property, plant and equipment that would be used for future research projects, these items were impaired. The items are stored at a research site or at the unit/platform.

All items of property, plant and equipment are owned by the entity

Included in laboratory equipment is the donation received of R20,622,547.

There are no restrictions on the title of Property, plant and equipment.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R

10. Property, plant and equipment (continued)

Property, plant and equipment in the process of being constructed or developed

Cumulative expenditure recognised in the carrying value of property, plant and equipment

Buildings	4,648,683	6,069,528

Reconciliation of Work-in-Progress 31 March 2024

	INCLUDED WITHIN INFRASTRUCTURE	TOTAL
Opening balance	6,069,528	6,069,528
Additions/capital expenditure	203,428	203,428
Transferred to expense	(1,624,273)	(1,624,273)
	4,648,683	**4,648,683**

Reconciliation of Work-in-Progress 31 March 2023

	INCLUDED WITHIN INFRASTRUCTURE	TOTAL
Opening balance	14,965,309	14,965,309
Additions/capital expenditure	4,872,203	4,872,203
Capitalised to buildings	(13,767,984)	(13,767,984)
	6,069,528	**6,069,528**

Expenditure incurred to repair and maintain property, plant and equipment

Expenditure incurred to repair and maintain property, plant and equipment included in Statement of Financial Performance

	31 MARCH 2024 R	31 MARCH 2023 R
Contracted services	17,598,774	**16,235,908**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

11. Intangible assets

	31 MARCH 2024			31 MARCH 2023		
	COST/ VALUATION	ACCUMULATED AMORTISATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE	COST/ VALUATION	ACCUMULATED AMORTISATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE
Computer software	35,589,950	(16,476,834)	19,113,116	25,185,267	(10,962,225)	14,223,042

Reconciliation of intangible assets – 31 March 2024

	OPENING BALANCE	ADDITIONS	DISPOSALS	AMORTISATION	TOTAL
Computer software	14,223,042	11,707,723	(1)	(6,817,648)	19,113,116

Reconciliation of intangible assets – 31 March 2023

	OPENING BALANCE	ADDITIONS	AMORTISATION	TOTAL
Computer software	15,029,685	2,805,666	(3,612,309)	14,223,042

There are no restrictions on the title of intangible assets.

12. Living Resources

	31 MARCH 2024			31 MARCH 2023		
	COST/ VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE	COST/ VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE
Rhesus monkeys	825,571	(300,211)	525,360	939,805	(303,431)	636,374
Vervet monkeys	848,479	(310,800)	537,679	829,814	(304,041)	525,773
Total	**1,674,050**	**(611,011)**	**1,063,039**	**1,769,619**	**(607,472)**	**1,162,147**

Reconciliation of living resources – March 2024

	OPENING BALANCES	ADDITIONS	DISPOSALS	DEPRE-CIATION	TOTAL
Rhesus monkeys	636,374	76,268	(155,743)	(31,539)	525,360
Vervet monkeys	525,773	70,263	(29,988)	(28,369)	537,679
	1,162,147	**146,531**	**(185,731)**	**(59,908)**	**1,063,039**

Reconciliation of living resources – March 2023

	OPENING	ADDITIONS	DISPOSALS BALANCE	DEPRE-CIATION	TOTAL
Rhesus monkeys	639,920	114,401	(73,705)	(44,242)	636,374
Vervet monkeys	716,977	42,808	(191,161)	(42,851)	525,773
	1,356,897	**157,209**	**(264,866)**	**(87,093)**	**1,162,147**

The last selling price per animal type was used to determine the fair value as there is not an active market for these animals.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

13. Investments in controlled entities

NAME OF COMPANY	HELD BY	% HOLDING 31 MARCH 2024	% HOLDING 31 MARCH 2023	CARRYING AMOUNT 31 MARCH 2024	CARRYING AMOUNT 31 MARCH 2023
Medres (Pty) Ltd	SAMRC	100.00%	100.00%	1	1
Jiresha Medical (Pty) Ltd	Medres (Pty) Ltd	42.00%	42.00%	1	1
				2	**2**

The carrying amounts of controlled entities are shown net of impairment losses.

The financial statements of Medres (Pty) Ltd and Jirehsa Medical (Pty) Ltd have not been consolidated with those of the SAMRC, as they are not considered material in the context of SAMRC.

Controlled entities with less than 50% voting powers held

Although the entity holds less than 50% of the voting powers in Jirehsa Medical (Pty) Ltd the investment is considered a controlled entity because SAMRC has the power to govern the financial and operating policies of Jirehsa Medical (Pty) Ltd.

During the year under review Jirehsa issued additional shares. The percentage shareholding has not changed by the share issue.

14. Payables from exchange transactions

	31 MARCH 2024 R	31 MARCH 2023 R
Trade payables	42,509,397	78,405,009
Leave accrual	21,656,816	20,902,587
Accruals	51,301,948	67,013,717
Interest due to funders	169,359	169,134
	115,637,520	**166,490,447**

The decrease in payables from exchange transactions is attributed to amounts due in respect of grants awarded.

The carrying amount of trade payables are denominated in the following currencies:

Rand	39,692,523	76,471,247
US Dollar	1,982,892	1,748,699
Pound Sterling	821,337	185,063
Euro	8,152	–
Naira	4,493	–
	42,509,397	**78,405,009**

Leave accrual

Balance at the beginning of the year	20,902,587	22,089,407
Leave payouts	(10,281,142)	(9,202,628)
Movement recognised in surplus or deficit	11,035,371	8,015,808
	21,656,816	**20,902,587**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

15. Provisions

Reconciliation of provisions – 31 March 2024

	OPENING BALANCE	ADDITIONS	UTILISED DURING THE YEAR	REVERSED DURING THE YEAR	TOTAL
Provision for legal fees	929,019	–	–	–	929,019
Provision for collaborative research	–	188,000	–	–	188,000
Provision for performance bonus	6,432,869	15,842,307	(6,405,789)	(27,080)	15,842,307
Other provisions	3,711,833	4,059,726	(3,711,833)	–	4,059,726
	11,073,721	**20,090,033**	**(10,117,622)**	**(27,080)**	**21,019,052**

Reconciliation of provisions – 31 March 2023

	OPENING BALANCE	ADDITIONS	UTILISED DURING THE YEAR	REVERSED DURING THE YEAR	TOTAL
Provision for legal fees	929,019	–	–	–	929,019
Provision for collaborative research	958,000	–	(958,000)	–	–
Provision for performance bonus	5,897,840	6,432,869	(5,856,321)	(41,519)	6,432,869
Other provisions	2,866,561	3,101,721	(2,256,449)	–	3,711,833
	10,651,420	**9,534,590**	**(9,070,770)**	**(41,519)**	**11,073,721**

Collaborative research costs

At 31 March 2024 self initiated grants were provided for as the institutions have not responded to the request to submit an invoice. The March 2022 self initiated grants were paid during the period under review (31 March 2023: There was no provision for collaborative research grants. The grants were all settled during the period under review).

Provision for legal fees

The legal fees provision relates to the estimated legal costs that is due to NEHAWU regarding a previous bonus dispute.

Other provisions

The other provisions at year-end relate to the Department of Labour assessment for the claim for occupational injury on duty assessment for 2024 (COIDA) and an admission of no liability settlement amount for two ex-employees. (March 2023: The other provisions relate to the repayment of unspent grant funds to the National Institute of Health and the Department of Labour assessment for the claim for occupational injury on duty assessment for 2023 (COIDA).

Provision for performance bonus

The performance bonus cycle was changed after discussions and agreement with the union. The Accounting Authority approved the change in bonus cycle which will result in payments being made after the financial year end. The amount reflected is the 2023/2024 provision for performance bonuses.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
16. Deferred income		
The decrease in deferred income can be attributed to the utilisation of contract funds received in advance: Department of Science and Technology; Department of Health; The Elma Philanthrope; Michelle & Susan Dell Foundation; Global Fund; MRC UK; EDCTP; The Chan Soon – Shiong Family Foundation and Bill & Melinda Gates Foundation.		
Deferred income	448,637,352	549,632,730
Summary of deferred income		
Research grants received in advance	448,539,002	549,433,333
Other funds received in advance	98,350	199,397
	448,637,352	**549,632,730**

17. Employee benefit obligations

Defined benefit plans

Post retirement medical aid plan

SAMRC took a compulsory insurance policy in order to fund post retirement medical obligations of its ex-employees. Given the nature of the policy, it is appropriate to treat this as a plan asset. Certain assets have been allocated specifically for the purpose of covering the post retirement medical aid defined benefit liability. The defined benefit medical liability has been recognised and accounted for under the requirements of GRAP 25 – Employee Benefits. The assets have been accounted for in terms of the requirements of the accounting standards to which they relate and not in terms of GRAP 25 because the plan is not registered. The Post retirement medical aid plan is valued annually in compliance with GRAP 25. The relevant assets are included in the statement of financial position. The valuation is based on an employer subsidy of a percentage of members' post-employment medical aid contributions, subject to the benchmark maximum. SAMRC considers paying the annual contribution in order to eliminate the liability. There are no in service members.

The risks to which the plan exposes the entity are the market performance of the plan in order to meet the liability. The entity will investigate options available to eliminate the net liability as far as possible.

The basis on which the discount rate has been determined is: by reference to market yields at the balance sheet date of South African long-term bonds.

Pension funds

SAMRC personnel are members of the following pension funds

- State Pension Fund (Associated institutions – AIPF) (Act No. 51 of 1963)
- State Pension fund for temporary employees (Act No. 75 of 1979)
- SAMRC Pension fund (since January 1994)

(a) The first two funds were established by Law and are regulated by the respective Acts.

(b) The last-named fund is regulated by the Pension Fund Act and is managed by an independent Board of Trustees. The SAMRC Pension fund was actuarially valued at 1 April 2023. Next statutory valuation for the fund is 1 April 2026.

(c) The first two funds offer defined benefits to staff. With regard to the SAMRC Pension fund, some members are on a defined benefit scheme, while the remainder are on a defined contribution scheme. The Fund operated a closed defined benefit section for members who joined prior to 1 July 1998.

The SAMRC Pension Fund is valued annually in compliance with GRAP 25.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	2024 31 MARCH R	2023 31 MARCH R
17. Employee benefit obligations (continued)		
The amounts recognised in the statement of financial position are as follows:		
Carrying value		
Post retirement medical aid – Present value of the defined benefit obligation – wholly unfunded	(1,230,000)	(1,226,000)
Post retirement medical aid – Present value of the defined benefit obligation – partly or wholly funded	(18,560,000)	(18,436,000)
Post retirement medical aid – Fair value of plan assets	13,877,000	14,135,000
Pension Fund – Present value of the defined benefit obligation	(52,268,000)	(83,039,000)
Pension Fund – Fair value of the plan assets	61,229,000	89,533,000
	3,048,000	**967,000**
Non-current assets	8,961,000	6,494,000
Non-current liabilities	(5,913,000)	(5,527,000)
	3,048,000	**967,000**
Post Retirement Medical Aid		
The fair value of plan assets includes:		
Changes in the net defined liability (asset) are as follows:		
Opening balance	5,527,000	6,343,000
Net interest expense or revenue	616,000	614,000
Remeasurements	979,000	(386,000)
Contributions by employer	(1,209,000)	(1,044,000)
	5,913,000	**5,527,000**
Changes in the present value of the defined benefit obligation are as follows:		
Opening balance	19,662,000	20,382,000
Interest cost	1,861,000	1,881,000
Remeasurements	592,000	(374,000)
Benefits paid	(2,325,000)	(2,227,000)
	19,790,000	**19,662,000**
Net expense recognised in the statement of financial performance are as follows:		
Net interest on the net defined benefit liability (asset)	**1,861,000**	**1,881,000**
Remeasurements of the net defined benefit liability (asset)	**(266,000)**	**(1,653,000)**
– Actuarial gains and losses arising from:	979,000	(386,000)
– Changes in demographic assumptions	750,000	(852,000)
– Changes in financial assumptions	229,000	466,000
– Return on plan assets, excluding amounts included in net interest	(1,245,000)	(1,267,000)
Contributions from employer	**(1,209,000)**	**(1,044,000)**
	386,000	**(816,000)**

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
17. Employee benefit obligations (continued)		
Calculation of actuarial gains and losses		
Actuarial (gains) losses – Obligation	592,000	(374,000)
Actuarial (gains) losses – Plan assets	387,000	(12,000)
	979,000	**(386,000)**
Changes in the fair value of plan assets are as follows:		
Opening balance	14,135,000	14,039,000
Return on plan assets	858,000	1,279,000
– Interest revenue	1,245,000	1,267,000
– Remeasurements	(387,000)	12,000
Contributions by employer	1,209,000	1,044,000
Benefits paid	(2,325,000)	(2,227,000)
	13,877,000	**14,135,000**
Key assumptions used		
Assumptions used at the reporting date:		
Discount rates used	11.80%	10.10%
Expected rate of return on assets	11.80%	10.10%
General increases in medical aid subsidy	8.10%	7.00%
Proportion of continuing membership at retirement	100.00%	100.00%
Proportion of retiring members who are married	80.00%	80.00%
Retirement age for staff who joined prior and after 1 May 1998	65	65

The plan accrued liability is taken as the aggregate of the present value of the employer's obligation required to settle the subsidies towards each member's medical scheme contributions, using the discounted cashflow approach.

The subsidies are assumed to be paid or payable, in terms of the employer subsidy policy. The subsidies are expected to grow with annual medical aid inflation increases allowing for expected future lifetimes of members and any adult dependent/spouse, in retirement, allowing for joint-life survival probabilities where applicable.

General increases to the employer's medical aid subsidy ("medical inflation") take into account the estimated future changes in the costs of medical services, resulting from both inflation and specific changes in medical costs. The inflation rate has been determined by reference to market yields at the balance sheet date of long-term bonds. The medical inflation premium has been set based on past experience for the industry.

Sensitivity analysis

Healthcare cost trends

Assumed healthcare cost trends rates have a significant effect on the amounts recognised in surplus or deficit. A one percentage point change in assumed healthcare cost trends rates would have the following effects:

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

17. Employee benefit obligations (continued)

	ONE PERCENTAGE POINT INCREASE	ONE PERCENTAGE POINT DECREASE
31 March 2024		
Discount Rate	18,656,000	21,068,000
Medical inflation	21,008,000	18,692,000
31 March 2023		
Discount rate	18,452,000	21,033,000
Medical inflation	20,958,000	18,524,000

Discount rate

Assumed discount rate have a significant effect on the liability. A one percentage point change in assumed discount rate would have the following effects:

The methods and assumptions used in preparing the sensitivity analyses and the limitations of those methods are: The valuation is based on the Projected Unit Credit valuation method. The expected rate of return on plan assets is based on market expectation, at the beginning of the period, for returns over the entire life of the related obligation.

The discount rate has been determined by reference to market yields at the balance sheet date of the South African long-term bonds.

Amounts for the current period and previous four years are as follows:

	2024 R	2023 R	2022 R	2021 R	2020 R
Defined benefit obligation – partially or wholly funded	18,560,000	18,436,000	19,219,000	20,320,000	21,314,000
Defined benefit obligation wholly unfunded	1,230,000	1,226,000	1,163,000	1,168,000	1,208,000
Plan assets	13,877,000	14,135,000	14,039,000	14,774,000	14,558,000
(Deficit) in the plan	(5,913,000)	(5,527,000)	(6,343,000)	(6,714,000)	(7,964,000)

Funding arrangements and funding policy

Expected contributions

The expected contributions to the plan for the next reporting period is R NIL.

Pension fund

SAMRC Pension Fund is subject to the provisions of the Pensions Fund Act 24 of 1956. Subject to the provisions of the Act and the Rules of the Fund, the sole responsibility for the management of the Fund is vested in the Trustees.

The nature of the benefits provided by the plan are the final salary for the defined benefit members as per the pension fund rules. The risks to which the plan exposes the entity are inflation: The risk that the future CPI inflation, which is the main driver of future salary increases, is higher than expected and uncontrolled. Open-ended, long-term liability: The risk that the liability may be volatile in the future and uncertain.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
17. Employee benefit obligations (continued)		
Changes in the net defined liability (asset) are as follows:		
Opening balance	6,494,000	4,882,000
Service cost	(2,351,000)	(2,493,000)
Net interest expense or revenue	604,000	375,000
Remeasurements	1,631,000	1,076,000
Contributions	2,583,000	2,654,000
	8,961,000	**6,494,000**
Changes in the present value of the defined benefit obligation are as follows		
Opening balance	83,039,000	82,304,000
Service cost	2,351,000	2,493,000
Interest cost	7,938,000	8,816,000
Contributions by plan participants	901,000	925,000
Benefit payments	(36,197,000)	(7,314,000)
Actuarial (gain)	(5,422,000)	(3,753,000)
Reinsurance premiums	(221,000)	(299,000)
Expenses	(121,000)	(133,000)
	52,268,000	**83,039,000**
Net expense recognised in the statement of financial performance are as follows:		
Service cost	**2,351,000**	**2,493,000**
– Current service cost	2,351,000	2,493,000
Net interest on the net defined benefit liability (asset)	**(604,000)**	**(375,000)**
Remeasurements of the net defined benefit liability (asset)	**(1,631,000)**	**(1,076,000)**
– Actuarial gains and losses arising from:	(1,631,000)	(1,076,000)
– Changes in financial assumptions	(1,631,000)	(1,076,000)
Contributions	**(2,583,000)**	**(2,654,000)**
	(2,467,000)	**(1,612,000)**
Calculation of actuarial gains and losses		
Actuarial (gains) losses – Obligation	(5,422,000)	(3,753,000)
Actuarial (gains) losses – Plan assets	3,791,000	2,677,000
	(1,631,000)	**(1,076,000)**
Changes in the fair value of plan assets are as follows:		
Opening balance	89,533,000	87,186,000
Return on plan assets	8,542,000	9,191,000
– Interest revenue	8,542,000	9,191,000
Contributions by employer	2,583,000	2,654,000
Contributions by members	901,000	925,000
Benefits paid	(36,197,000)	(7,314,000)
Expenses	(121,000)	(133,000)
Actuarial gain/(loss)	(3,791,000)	(2,677,000)
Reinsurance premiums	(221,000)	(299,000)
	61,229,000	**89,533,000**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
17. Employee benefit obligations (continued)		
Key assumptions used		
Assumptions used at the reporting date:		
General inflation rate	6.90 %	6.20 %
Discount rate	12.90 %	11.70 %
Interest income on assets	12.90 %	11.70 %
Salary increase rate (excluding merit increases)	7.90 %	7.20 %
Pension increase rate	4.60 %	4.13 %
Retirement age for staff who joined prior and after 1 May 1998	65	65

The net actuarial gain on the define benefit obligation is largely as a result of: The higher than expected increase in the final average salaries used to calculate each member's individual withdrawal benefit. The increase in final average salaries was 7.80% in comparison with the expected increase of 6.70%. Since the individual withdrawal benefit for 14 of the 16 members active as at 31 March 2024 exceed their calculated liability on the accounting valuation basis, the higher than expected increase in the final average salaries have resulted in a loss. Demographic experience being different than expected.

The investment strategy in respect of the defined benefit section of the fund was revised in March 2023 with 90% of the MRC defined benefit portfolio being invested in a matched portfolio (Liability driven investment strategy) and 10% in an unmatched global portfolio (growth portfolio).

Sensitivity analysis

Inflation rate

Assumed inflation rates will have an impact on the value of the liability. A one percentage point change in inflation rates would have the following effects:

	ONE PERCENTAGE POINT INCREASE	ONE PERCENTAGE POINT DECREASE
31 March 2024		
Defined benefit obligation	(53,473,000)	(47,130,000)
Effect of withdrawal benefits on DBO	(3,264,000)	(1,237,000)
Total DBO	(56,737,000)	(48,367,000)
31 March 2023		
Defined benefit obligation	(82,576,000)	(72,489,000)
Effect of withdrawal benefits on DBO	(7,760,000)	(4,052,000)
Total DBO	(90,336,000)	(76,541,000)

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

17 Employee benefit obligations (continued)

Discount rate

Assumed discount rate have a significant effect on the amounts recognised in surplus or deficit. A one percentage point change in assumed discount rate would have the following effects:

	ONE PERCENTAGE POINT INCREASE	ONE PERCENTAGE POINT DECREASE
31 March 2024		
Defined benefit obligation	(45,816,000)	(55,171,000)
Effect of withdrawal benefit on DBO	(1,539,000)	(2,929,000)
Total DBO	(47,355,000)	(58,100,000)
31 March 2023		
Defined benefit obligation	(70,365,000)	(85,343,000)
Effect of withdrawal benefit on DBO	(4,455,000)	(7,321,000)
Total DBO	(74,820,000)	(92,664,000)

The methods and assumptions used in preparing the sensitivity analyses and the limitations of those methods are: The valuation is based on the Projected Unit Credit valuation method. The expected rate of return on plan assets is based on market expectation, at the beginning of the period, for returns over the entire life of the related obligation.

The discount rate has been determined by determined by reference to market yields at the balance sheet date of the South African long-term bonds.

Amounts for the current period and previous four years

Assumed assumption have a significant effect on the amounts recognised in surplus or deficit. A one percentage point change in assumed assumption would have the following effects:

	2024 R	2023 R	2022 R	2021 R	2020 R
Defined benefit obligation	52,268,000	83,039,000	82,304,000	85,789,000	84,536,000
Plan assets	61,229,000	89,533,000	87,186,000	93,817,000	85,839,000
Surplus in the plan	8,961,000	6,494,000	4,882,000	8,028,000	1,303,000

Expected contributions

The expected contributions to the plan for the next reporting period is R2,855,000 member and entity contributions.

Defined contribution plans

It is the policy of the entity to provide retirement benefits to all its employees.

The entity is under no obligation to cover any unfunded benefits.

	31 MARCH 2024 R	31 MARCH 2023 R
The amount recognised as an expense for defined contribution plans is	32,454,010	29,715,870

Defined contribution plan: SAMRC Pension Fund

The SAMRC Pension Fund has a Defined Contribution section for members who joined after 1 May 1998.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
18. Earmarked funds		
Botha trust	151,636	151,636
Bruhns trust	1,544,764	1,437,497
Melville Douglas trust	13,325	13,325
Q&S Abdool Karim trust	3,334,123	3,083,866
FJ Kleynhans trust	111,442	111,442
	5,155,290	**4,797,766**

The Earmarked funds are donations; bequests from deceased estates or cash received for a limited period to be used for visiting eminent scientists; cancer research or tuberculosis research.

The Earmarked funds are held at the Reserve Bank.

The monies are ring fenced separately from the cash balances of the SAMRC refer to note 8.

The Bruhns and Q & S Abdool Karim trust funds earned interest.

19. Accumulated surplus

Accumulated surplus	412,948,611	434,315,218

The policy of the SAMRC is to maintain a reserve of R50 million to provide for any unforeseen health emergencies. The accumulated surplus at the end of the reporting period is required to fund capital projects and other commitments as well as the maintenance of current funding levels of research projects over the MTEF period. The surplus will also be used to attract equivalent leverage funding from international funders.

20. Revenue

Income from contracts, grants and services rendered (exchange)	552,429,032	466,501,867
Rental income	6,208,292	6,661,641
Gain on foreign exchange	1,162,965	8,458,753
Other income	13,277,161	12,910,101
Interest received – investment	62,613,758	42,317,948
Dividends received	181,529	227,927
Fair value adjustments	211,431	–
Government grants & subsidies	660,413,043	677,264,348
Income from contracts and grants (non-exchange)	134,413,603	126,871,219
	1,430,910,814	**1,341,213,804**

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
20. Revenue (continued)		
The amount included in revenue arising from exchanges of goods or services are as follows:		
Income from contracts, grants and services rendered (exchange)	552,429,032	466,501,867
Rental income	6,208,292	6,661,641
Gain on foreign exchange	1,162,965	8,458,753
Fair value adjustments	211,431	–
Other income	13,277,161	12,910,101
Interest received – investment	62,613,758	42,317,948
Dividends received	181,529	227,927
	636,084,168	**537,078,237**
The amount included in revenue arising from non-exchange transactions is as follows:		
Baseline grant	660,413,043	677,264,348
Income from contracts and grants (non-exchange)	134,413,603	126,871,219
	794,826,646	**804,135,567**
Included in Income from contracts, grants and services rendered (non-exchange) is the in kind donations received R20,622,547		
Revenue		
Income from contracts, grants and services rendered – exchange	552,429,032	466,501,867
Income from contracts, grants and services rendered – non-exchange	134,413,603	126,871,219
Government grants	660,413,043	677,264,348
	1,347,255,678	**1,270,637,434**
21. Other income		
Rental income – third party	6,208,292	6,661,641
Gain on foreign exchange	1,162,965	8,458,753
Other income	13,277,161	12,910,101
	20,648,418	**28,030,495**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
22. Investment income		
Dividend revenue		
Listed financial assets – Local	181,529	227,927
Interest revenue		
Unit trusts	46,831	32,068
Bank	649,409	335,706
Interest charged (reversed) on trade and other receivables	1,900	(17,155)
Corporation for public deposits	61,915,618	41,967,329
	62,613,758	**42,317,948**
	62,795,287	**42,545,875**
23. Operating expenses		
Depreciation and amortisation	32,649,514	26,087,381
Collaborative research costs	550,795,556	557,624,439
Debt impairment (reversal)	(136,828)	356,428
Employee costs	551,948,716	484,065,156
Loss on disposals	3,621,990	2,488,740
Impairment loss (reversal) of impairments on property, plant and equipment	1,235,223	(1,251,843)
General expenses	268,191,189	239,911,953
Lease rentals on operating lease	3,895,033	3,340,910
Repairs and maintenance	19,705,477	20,384,868
Surrender of surplus	20,000,000	–
	1,451,905,870	**1,333,008,032**

The 2023 General expenses amount has been amended due to the reclassification of the Collaborative research costs previously included now disclosed separately (R557,624,439).

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
24 Employee related costs		
Basic	445,861,114	399,495,406
Bonus	15,815,227	6,391,350
UIF	1,764,776	1,668,074
Leave payments	11,567,427	10,204,487
Movements in retirement benefit assets and liabilities	(2,081,000)	(2,428,000)
Other salary related costs	13,316,355	10,918,787
Defined pension benefit plan expense – current service cost	2,726,031	2,798,148
Overtime payments	1,495,604	1,259,919
Temporary staff	27,820,387	22,996,675
Defined pension contribution plan expense	32,454,010	29,715,870
Post retirement medical aid contribution	1,208,785	1,044,440
	551,948,716	**484,065,156**

The bonus amount includes the 2023/2024 provision for performance bonus of R15,842,307 and an unutilised amount of R27,080 relating to the 2022/2023 provision that was reversed.

Basic salary includes other non pensionable allowances for the period under review.

Staff exercised the option to encash a maximum of ten days leave, the encashment of leave is included in the leave payment amount.

25. Finance costs

Other interest paid	371,551	293,179

SAMRC had to refund interest due to its funders for monies received in advance (March 2024: R225; March 2023: R38,955), to the earmarked funds (March 2024: R370,774; March 2023: R249,784). Interest paid to suppliers for late payments of account is not classified as fruitless and wasteful expenditure if the invoice is received late from the supplier (March 2024: R552; March 2023: R1,298). During the 2023 financial year interest charged on an excessive municipal bill amounting to R3,142 was paid, the water bills were investigated by an appointed service provider.

26. Debt impairment

Debt impairment	–	80,255
(Reversal of) Provision for debt impairment	(136,828)	276,173
	(136,828)	**356,428**

The provision for debt impairment reflected above include the current periods provision for bad debt of R489,484 (including VAT of RNil and reversal of the previous year's provision (March 2023 provision for bad debts of R626,312 (including VAT of RNil)).

The 31 March 2023 debt written off relates to amounts owed by rental tenants ZA Refractories (Pty) Ltd and The Leading Edge.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
27. General expenses		
Advertising	2,614,308	1,591,243
Auditors remuneration	3,312,042	2,962,152
Bank charges	739,624	515,003
Cleaning consumables	7,461,135	6,735,894
Computer expenses	40,500,283	30,612,248
Consulting and professional fees	15,750,741	14,331,644
Donations	470,159	824,119
Insurance	5,032,051	5,988,777
Personal Protective Equipment	2,028	126,500
Magazines, books and periodicals	9,638,775	8,255,250
Postage and courier	1,380,104	2,125,690
Printing, stationery and publication costs	10,638,387	11,781,967
Security	11,708,053	10,799,556
Subscriptions and membership fees	1,602,396	1,123,867
Telephone and fax	1,525,160	3,186,233
Training	4,088,615	4,700,729
Travel, subsistence and conference attendance	57,445,381	45,047,840
Utilities	18,607,182	20,166,184
Laboratory operating cost	50,937,608	53,157,116
Skills Development levies	3,847,309	3,451,731
Other expenses	20,889,848	12,428,210
	268,191,189	**239,911,953**

The Collaborative research costs previously included in General expenses is now disclosed separately (2023: R557,624,439).

Travel, subsistence and conference attendance

Local travel	6,365,930	4,861,197
Overseas travel	11,814,836	7,903,394
Accommodation – local and overseas	9,171,021	7,092,191
Subsistence and travel expenditure	8,854,458	8,451,580
Conference expenditure	9,450,946	5,459,067
Participant incentives	11,788,190	11,280,411
	57,445,381	**45,047,840**

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
27. General expenses (continued)		
Other expenses		
Canteen costs	739,283	497,400
Administration costs	808,475	842,445
Personnel teas	1,716,130	1,459,134
Hire of premises and equipment	15,768,157	7,884,373
Licenses	103,680	81,788
Staff recruitment costs	226,465	250,251
Employee wellness costs	992,294	856,875
Pot and plant rental	105,717	110,751
Uniforms	420,079	445,193
Royalty distribution	9,568	–
	20,889,848	**12,428,210**

The increase in travel, subsistence and conference attendance and other expenses is attributed to costs incurred by the Conference secretariat for events such as the African Rotavirus Symposium held in Nigeria and an increase in travel activity for research projects.

28. Collaborative research costs

Extramural units and self initiated research grants	278,377,447	246,615,705
Collaborating research partners and research grant awards	272,118,109	311,008,734
Sponsorships	300,000	–
	550,795,556	**557,624,439**

Collaborative research costs include amounts that were paid to research institutions which relates to tranche payments of contractual agreements signed with institutions who will conduct research on behalf of the SAMRC as part of the entity's mandate. No goods or services are received for these payments as they relate to start-up costs for research, the 2023/2024 amount is R117,714,713 (2022/2023 amount is R137,977,091).

29. Surrender of surplus

SAMRC was requested to repay unspent baseline funds received in 2021 for the Sisonke project.

Repayment of unspent funds received for the Sisonke project	20,000,000	–

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
30. Fair value adjustments		
Other financial assets		
Other financial assets at fair value	211,431	(367,464)
31. Auditors' remuneration		
Fees	3,312,042	2,962,152
32. Operating deficit		
Operating deficit for the year is stated after accounting for the following:		
Operating lease charges		
Premises		
Contractual amounts	3,895,033	3,340,910
Loss on disposal of assets	3,621,990	2,488,740
Impairment loss/reversal of impairments on property, plant and equipment	1,235,223	(1,251,843)
(Gain) on exchange differences	(1,162,965)	(8,458,753)
Amortisation on intangible assets	6,817,648	3,612,309
Depreciation on property, plant and equipment	25,771,958	22,387,979
Depreciation on living resources	59,908	87,093
Employee costs	551,948,716	484,065,156
General expenses	268,191,189	239,911,953

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
33. Cash generated from (used in) operations		
(Deficit) surplus	(21,366,607)	7,545,129
Adjustments for:		
Depreciation and amortisation	32,649,514	26,087,381
Loss on sale of assets	3,621,990	2,488,740
(Gain) Loss on foreign exchange	(1,162,965)	(8,458,753)
Fair value adjustments	(211,431)	367,464
Impairment loss/reversal of impairments on intangible assets and property, plant and equipment	1,235,223	(1,251,843)
Debt impairment	(136,828)	356,428
Movements in retirement benefit assets and liabilities	(2,081,000)	(2,428,000)
Movements in provisions	9,945,331	422,301
Capitalisation of financial assets	(191,740)	(226,021)
Non-cash adjustment on biological assets	–	25,000
Non-cash adjustment on living resources	(146,531)	(157,209)
Other non-cash items: Donation in kind	(20,622,547)	–
Other non-cash items: asset replacement	(2,010,452)	–
Other non-cash items: property, plant and equipment	3,634,725	–
Changes in working capital:		
Receivables from exchange transactions	27,653,989	(60,837,963)
Receivables from non-exchange transactions	(3,538,369)	(2,387,079)
Prepayments	(4,351,391)	1,518,195
Payables from exchange transactions	(55,028,604)	10,010,946
VAT	(9,231,214)	3,776,553
Deferred income	(100,995,378)	99,129,843
	(142,334,285)	**75,981,112**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

34. Financial instruments disclosure

Categories of financial instruments

31 March 2024

Financial assets

	AT FAIR VALUE	AT AMORTISED COST	AT COST	TOTAL
Trade and other receivables from exchange transactions	–	88,216,813	–	88,216,813
Receivables from non-exchange transactions	–	9,055,438	–	9,055,438
Cash and cash equivalents	–	522,082,612	–	522,082,612
Investments in controlled entities	–	–	2	2
Financial assets	9,551,014	–	–	9,551,014
	9,551,014	**619,354,863**	**2**	**628,905,879**

Financial liabilities

	AT AMORTISED COST	TOTAL
Trade and other payables from exchange transactions	115,637,520	115,637,520

31 March 2023

Financial assets

	AT FAIR VALUE	AT AMORTISED COST	AT COST	TOTAL
Trade and other receivables from exchange transactions	–	112,677,459	–	112,677,459
Receivables from non-exchange transactions	–	5,517,069	–	5,517,069
Cash and cash equivalents	–	719,684,368	–	719,684,368
Investments in controlled entities	–	–	2	2
Financial assets	9,149,013	–	–	9,149,013
	9,149,013	**837,878,896**	**2**	**847,027,911**

Financial liabilities

	AT AMORTISED COST	TOTAL
Trade and other payables from exchange transactions	166,490,447	166,490,447

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
35. Commitments		
Authorised commitments		
Already contracted for but not provided for		
– Property, plant and equipment – buildings	3,598,589	914,018
– Property, plant and equipment – vehicles and containers	999,124	–
– Property, plant and equipment – furniture and office equipment	220,641	683,117
– Property, plant and equipment – computer equipment	144,139	10,363,324
– Property, plant and equipment – laboratory equipment	6,261,616	1,644,736
– Intangible assets	374,850	1,082,981
– Goods and services	10,661,713	16,032,000
– Research grants	–	1,775,072
– Operating leases	2,506,835	5,339,916
	24,767,507	**37,835,164**
Already contracted for but not provided for	24,767,507	37,835,164

This committed expenditure relates to property, plant and equipment; intangible assets; goods and services and research grants and will be financed by retained surpluses, existing cash resources and funds internally generated.

The 2022/2023 property, plant and equipment figures were restated to disclose each class of property, plant and equipment.

Operating leases – as lessee (expense		
Minimum lease payments due		
– within one year	2,506,835	3,217,831
– in second to fifth year inclusive	–	2,122,085
	2,506,835	**5,339,916**

Operating lease payments represent rentals payable by the entity for certain of its office properties. Leases are negotiated for an average term of three years. No contingent rent is payable.

Operating leases – as lessor (income)		
Minimum lease payments due		
– within one year	5,263,103	3,437,695
– in second to fifth year inclusive	12,011,076	3,892,283
– later than five years	561,010	1,360,969
	17,835,189	**8,690,947**

Certain of the entity's buildings generate rental income. Lease agreements have terms from 12 months to 9 years and eight months.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

36. Related parties

Relationships

Executive authority	Dept. of Health (DOH)
Public entities in the same economic entity	National Health Laboratory Services (NHLS) South African Health Products Regulatory Authority (SAHPRA)
Controlled entities	Medres (Pty) Ltd refer to note 13 Jirehsa Medical (Pty) Ltd refer to note 13
Members of key management	Prof G Gray (President appointed 1 April 2014) Mr. N Buick (Chief Financial Officer appointed 16 July 2012 till 8 December 2023). The official is a director of the controlled entity Medres (Pty) Ltd and a board member of National Health Laboratory Services (NHLS) from October 2021. Mr. S Nqgongwa (Chief Financial Officer appointed 4 September 2023) Prof. L Zuhlke (Vice President appointed 1 February 2022) Dr. M Mdhluli (Chief research operations officer appointed 1 September 2017). Mr. M Popo (Legal Counsel appointed 1 February 2019) Dr. M Mulder (Executive director appointed on 1 June 2021). The official is a director of the controlled entities Medres (Pty) Ltd and Jirehsa Medical (Pty) Ltd. Ms. VN Bam (Executive director appointed on 1 September 2021)
Board members	Prof. J Mahlangu (Chairperson from 1 November 2019. Board member from 1 November 2016) Prof. R Carolissen, term started 1 November 2019 Prof. C Dandara, term 1 November 2019 – 31 October 2022 Dr. T Tucker, term started 1 November 2019 Prof. L Skaal, term 1 November 2016 – 31 October 2022 Prof. T Sodi, term 1 November 2016 – 31 October 2022 Prof. E Seekoe, term started 1 November 2019 Prof. S Velaphi, term 1 November 2016 – 31 October 2022 Prof. T Mavundla, term started 1 November 2019 Prof. L Zungu, term 1 November 2019 – 31 October 2022 Prof. B Shaw, term 1November 2016 – 31 October 2022 Prof. W Rae, term 1 November 2016 – 31 October 2022 Dr. M Madikizela, term started 1 November 2019 Prof. E Mukwevho, term started 1 November 2019 Adv. D Khoza, term started 1 November 2019 Ms. J Williams, term 1 November 2019 – 31 October 2022 Prof. B Biccard, term started 1 November 2022 Prof. B Chiliza, term started 1 November 2022 Ms. D Dondur, term started 1 November 2022 Prof. Z Makatini, term started 1 November 2022 Prof. LR Mathivha, term started 1 November 2022 Prof. M Moshabela, term 1 November 2022 to 31 August 2023 Prof. T Naledi, term started 1 November 2022 Prof. T Pillay, term started 1 November 2022

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
36. Related parties (continued)		
Related party balances		
Loan accounts – Owing (to) by related parties		
Medres (Pty) Ltd (The loan is not considered to be recoverable and has been written off.)	234,630	234,630
Amounts included in Trade receivable (Trade Payable) regarding related parties		
National Health Laboratory Services (NHLS)	(469)	(150,000)
Dept. of Health (DOH)	–	7,000,000
South African Health Products Regulatory Authority (SAHPRA)	39,890	–
Deferred Income (grants received in advance)		
Dept. of Health (DOH)	1,382,812	5,716,884
Revenue – grants received and services rendered to related parties		
Dept. of Health (DOH, revenue from non-exchange)	660,413,043	677,264,348
Dept. of Health (DOH) Contracts, revenue from exchange	584,348	6,679,130
National Health Laboratory Services	6,087	142,399
South African Health Products Regulatory Authority (SAHPRA) refund of unspent funds	39,890	133,900
	661,043,368	**684,219,777**
Expenditure such as grants awarded, extra-mural unit grants and collaborative research grants incurred with related party suppliers.		
Repayment of unspent grant funds.		
Dept. of Health (DOH) repayment of unspent grant	275,008	–
National Health Laboratory Services (NHLS)	160,469	523,000
South African Health Products Regulatory Authority (SAHPRA)	151,000	705,080
	586,477	**1,228,080**
Executive authority information		
Minister: Dr. MJ Phaahla		
No subsistence, travel and other related re-imbursement costs have been paid.		
Director General: Dr. S Buthelezi		
No subsistence, travel and other related re-imbursement costs have been paid.		
Executive Directors leave balances		
Ms. V Bam	152,768	128,160
Mr. N Buick	–	109,024
Prof. G Gray	237,720	223,973
Mr. M Popo	83,671	6,064
Dr. A Mathee	183,917	118,158
Dr. M Mdhluli	346,852	231,999
Dr. M Mulder	105,472	132,497
Mr. S Ngqongwa	68,409	–
Prof. L Zuhlke	133,747	73,507
	1,312,556	**1,023,382**

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

37. Member's emoluments

Executive

31 March 2024

	EMOLUMENTS	VEHICLE & PARKING & CELLPHONE ALLOWANCE	ACCOMMO-DATION AND ENTERTAIN-MENT	LOCAL AIR TRAVEL AND PARKING	TOTAL
Professor J Mahlangu	146,718	12,084	5,713	16,670	181,185
Professor B Biccard	37,772	3,684	–	4,459	45,915
Professor R Carolissen	78,242	3,684	1,330	4,890	88,146
Professor B Chiliza	113,316	3,684	2,756	11,397	131,153
Ms D Dondur	162,868	3,684	10,113	23,508	200,173
Advocate D Khosa	107,920	3,952	2,757	12,537	127,166
Doctor Z Makatini	99,826	3,684	4,248	14,064	121,822
Professor M Moshabela	24,282	3,684	2,809	9,841	40,616
Professor M Madikizela	78,242	3,684	8,642	14,360	104,928
Professor T Mavundla	62,054	3,684	7,148	20,958	93,844
Professor L Mathivha	62,054	3,684	2,730	7,984	76,452
Professor E Mukwevho	102,524	9,427	15,675	17,857	145,483
Associate Professor T Naledi	70,148	3,684	–	–	73,832
Professor T Pillay	51,262	3,684	6,765	15,673	77,384
Professor E Seekoe	112,860	3,684	10,104	32,469	159,117
Doctor T Tucker	152,722	3,684	–	–	156,406
	1,462,810	**73,355**	**80,790**	**206,667**	**1,823,622**

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

37. Member's emoluments (continued)

31 March 2023

	EMOLUMENTS	VEHICLE & PARKING & CELLPHONE ALLOWANCE	ACCOMMO-DATION AND ENTERTAIN-MENT	LOCAL AIR TRAVEL AND PARKING	TOTAL
* Professor J Mahlangu	137,826	12,084	7,648	29,479	187,037
*** Professor B Biccard	18,886	1,535	–	–	20,421
* Professor R Carolissen	78,163	3,684	1,209	8,753	91,809
*** Professor B Chiliza	18,886	1,535	1,043	10,847	32,311
** Professor C Dandara	51,262	2,149	–	–	53,411
*** Ms D Dondur	55,404	1,535	20,948	12,634	90,521
* Advocate D Khosa	91,653	3,943	2,613	15,356	113,565
*** Doctor Z Makatini	32,376	1,535	3,733	18,639	56,283
*** Professor M Moshabela	18,886	1,535	6,316	14,411	41,148
* Professor M Madikizela	102,524	3,980	6,286	19,465	132,255
* Professor T Mavundla	94,430	3,684	6,295	18,264	122,673
*** Professor L Mathivha	13,490	1,535	5,039	10,579	30,643
* Professor E Mukwevho	88,955	15,975	12,798	28,409	146,137
*** Associate Professor T Naledi	24,282	1,535	–	–	25,817
*** Professor T Pillay	18,886	1,535	5,096	16,192	41,709
** Professor W Rae	43,168	2,149	–	–	45,317
* Professor E Seekoe	80,636	3,684	11,322	32,956	128,598
** Professor B Shaw	83,980	2,149	–	–	86,129
** Professor L Skaal	64,752	2,149	1,252	9,258	77,411
** Professor T Sodi	75,009	2,149	3,574	19,199	99,931
* Doctor T Tucker	109,285	3,684	–	4,379	117,348
** Professor S Velaphi	35,074	2,149	–	–	37,223
** Ms J Williams	64,752	2,149	1,252	8,360	76,513
** Professor L Zungu	59,277	2,149	1,252	18,324	81,002
	1,461,842	**80,190**	**97,676**	**295,504**	**1,935,212**

* *Old and current Board member*
** *Old Board member*
*** *New Board member*

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

37. Member's emoluments (continued)

EXECUTIVE DIRECTORS EMOLUMENTS

31 March 2024

	PACKAGE TOTAL INCL. LEAVE PAYOUT; ALLOWANCES AND LUMP SUM	BONUS	SUBSISTENCE AND TRAVEL	COMPANY CONTRI-BUTIONS	TOTAL
G Gray (President)	3,397,761	57,158	60,496	264,949	3,780,364
* N Buick (CFO)	2,231,350	57,158	720	195,249	2,484,477
** S Ngqongwa (CFO)	1,436,788	–	646	174,664	1,612,098
V Bam (Executive Director)	2,022,220	57,158	12,732	273,709	2,365,819
A Mathee (Executive Director)	1,764,113	57,158	10,099	227,602	2,058,972
M Mdhluli (CROO)	2,608,280	57,158	31,212	293,848	2,990,498
M Mulder (Executive Director)	2,046,284	57,158	10,491	267,582	2,381,515
M Popo (Executive Director)	2,098,497	57,158	720	169,808	2,326,183
L Zuhlke (Vice President)	2,656,389	57,158	89,440	282,925	3,085,912
	20,261,682	**457,264**	**216,556**	**2,150,336**	**23,085,838**

* *N Buick contract ended 8 December 2023. CFO handover period 4 September to 8 December 2023.*
** *S Ngqongwa started on 4 September 2023.*

31 March 2023

	PACKAGE TOTAL INCL. LEAVE PAYOUT; ALLOWANCES AND LUMP SUM	BONUS	SUBSISTENCE AND TRAVEL	COMPANY CONTRI-BUTIONS	TOTAL
G Gray (President)	3,208,525	82,357	55,855	250,273	3,597,010
N Buick (CFO)	2,890,037	82,357	1,420	308,910	3,282,724
V Bam (Executive Director)	1,931,845	30,409	4,970	236,698	2,203,922
A Mathee (Executive Director)	1,794,317	35,223	11,860	139,469	1,980,869
M Mulder (Executive Director)	1,941,861	46,202	3,811	242,386	2,234,260
M Mdhluli (CROO)	2,486,681	82,357	7,014	254,165	2,830,217
M Popo (Executive Director)	1,987,657	82,357	–	154,726	2,224,740
L Zuhlke (Vice President)	2,511,173	8,109	17,006	266,535	2,802,823
	18,752,096	**449,371**	**101,936**	**1,853,162**	**21,156,565**

* *M Mulder appointed 1 June 2021*
** *V Bam appointed on 1 September 2021*

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	31 MARCH 2024 R	31 MARCH 2023 R
38. Irregular expenditure and Fruitless and wasteful expenditure for the year		
Fruitless and wasteful expenditure	1,552	4,617

During the year under review no irregular expenditure was incurred (2023: RNil).

Expenditure relates to interest on the late renewal of motor vehicle licenses; traffic fines and interest on a municipal account.

The Accounting Authority approved interest on municipal bills totalling of R3,250 being an amount of R108 incurred in the current year and an amount of R3,142 incurred in 2023. The interest charges were investigated and it was determined that it was not incurred due to negligence on the part of the staff member (March 2023: R1,300 approved for interest on late payment of motor vehicle licenses in light of the prevailing circumstances at licensing departments).

Interest charged due to negligence on the part of the staff members and traffic fines paid is recovered from the employees. An amount of R1,244 was recovered from staff. In the 2022/2023 financial year traffic fines paid in 2021/2022 were recovered from staff and Interest charged due to negligence on the part of the staff members and traffic fines paid were recovered from the employees.

39. Deviation from supply chain management regulations

Paragraph 12(1)(d)(i) of Government gazette No. 27636 issued on 30 May 2005 states that a supply chain management policy must provide for the procurement of goods and services by way of a competitive bidding process.

Paragraph 36 of the same gazette states that the accounting officer may dispense with the official procurement process in certain circumstances, provided that he records the reasons for any deviations and reports them to the next meeting of ARIC and the Accounting Authority and includes a note to the annual financial statements.

All deviations were documented and will be submitted to the Accounting Authority or its delegate in terms of the Delegation of Authority Framework. Deviations were motivated in advance and subsequently approved.

40. Public Finance Management Act (PFMA)

Section 55 (2)

No material losses through criminal conduct were incurred during the period ended 31 March 2024. Irregular and fruitless and wasteful expenditure incurred has been disclosed in note 38.

Section 54 (2)

In terms of the PFMA and Treasury Regulation 28.3 the entity has developed and agreed to a framework of acceptable levels of materiality and significance.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

41. Budget differences

Material differences between budget and actual amounts

The baseline grant was cut by R37,450,000 due to budget cuts that were announced by National Treasury in the latter part of the 2023/2024 financial year, this is reflected in the difference amount for transfers received. The adjustment also reflects the VAT which is allocated as a transfer and subsidies expense. The SACENDU grant was included in the budgeted transfers received, but was allocated to the sale of goods and services as this is managed as a separate contract.

Sale of goods and services and other non-tax revenue were higher than anticipated. Higher than anticipated external funding from contracts and grants were received during the period under review. The increase in external contracts and grant funding also had a material effect on the salaries and goods and services costs.

42. Risk management

Liquidity risk

The entity's risk to liquidity is a result of the funds available to cover future commitments. The entity manages liquidity risk through an ongoing review of future commitments and credit facilities. Trade and other payables are due within 12 months and equal their carrying balances as the impact of discounting is not significant.

SAMRC's primary source of income is government grants and contractual income, funds receivable is estimated when preparing the MTEF. Budgets are prepared for each contract and spend is monitored on an ongoing basis to ensure the liquidity of the entity.

Credit risk

This is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. Management has a debtors policy in place, and this makes provision for credit evaluation for customers requiring credit above R1 million. Investments are allowed only in liquid securities and only with the SARB.

Contract work constitutes a significant portion of the SAMRC's income, and the major exposure is delays in finalising contracts, and disputes in terms of whether or not the outputs have been produced. A certain number of contracts are stated and paid on a reimbursive basis, and this poses a risk if the funder is not satisfied with the outputs.

The SAMRC operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar; GBP and the Euro. SAMRC receives substantial funding from the UK; USA and Europe, as a result its statement of financial position can be affected by movements in the US dollar; GBP and Euro. Foreign exchange risk arises from future commercial transactions, recognised assets and liabilities and net investments.

Due to uncertainties in respect of when cash will be received from overseas, SAMRC does not hedge foreign exchange fluctuations.

Approximately 13% of SAMRC's Trade and funder/grant debtors (R11,884,443) are exposed to currency compared to 9% last year (R10,943,960).

SAMRC's project office does a scenario calculation looking at how much would be lost if there was an unfavourable currency change. On the basis of this outcome, it will be decided whether or not to proceed with a particular project.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

42. Risk management (continued)

Market risk

Interest rate risk

In respect of income-earning financial assets interest-bearing financial liabilities, the table below indicates their average effective interest rates at the reporting date and the periods in which they mature.

Cash flow interest rate risk

FINANCIAL INSTRUMENT	CURRENT INTEREST RATE	DUE IN LESS THAN A YEAR	DUE IN ONE TO TWO YEARS	DUE IN TWO TO THREE YEARS	DUE IN THREE TO FOUR YEARS	DUE AFTER FIVE YEARS
Trade and other receivables – normal credit terms	11.75%	89,638,315	–	–	–	–
Cash in current banking institutions	–%	522,082,612	–	–	–	–
Trade and other payables – extended credit terms	11.75%	115,637,520	–	–	–	–

Foreign exchange risk

The entity does not hedge foreign exchange fluctuations.

Exchange rates on 31 March 2024 (31 March 2023) used for conversion of foreign items were:

USD – ABSA buying	18.9214	17.7803
USD – ABSA selling	18.9364	17.8051
GBP – ABSA buying	23.8123	21.9284
GBP – ABSA selling	23.8388	21.9662
EURO – ABSA selling	20.3798	–
NAIRA – ABSA selling	70.8833	–

The entity reviews its foreign currency exposure, including commitments on an ongoing basis. The entity has CFC accounts for specific foreign income grants whose payments are mainly made in foreign currency. The risk for currency fluctuations is eliminated by maintaining the CFC accounts for these grants.

43. Contingencies

Contingent liabilities

There is a high court claim by a research trial participant. The matter will be defended. At this stage, the outcome of the case is unknown and it is not practical to estimate the financial effect of the claim.

In the previous reporting period there was a high court claim by an ex-employee who passed-on shortly after instituting the claim that the SAMRC disputes. The Board has agreed to a mediation process to resolve the dispute and the SAMRC and the heir of the estate agreed to appoint a mediator. However, before a mediator could be appointed the heirs directly approached the SAMRC to negotiate a settlement. Negotiations were finalized during the reporting period. The SAMRC and the parties agreed to settle, a provision has been raised for the acceptance of no liability settlement amount.

The SAMRC will be applying to National Treasury to retain the accumulated surplus funds of R412,948,611. If approved the accumulated surplus funds will not have to be paid to National Treasury.

ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2024

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

43. Contingencies (continued)

Contingent assets

In October 2017 and November 2017 the South African Revenue Service (SARS) re-assessed the September 2016 vat period. Output vat amounting to R2,824,561 was disallowed and interest and penalties were levied amounting to R370,726 and R294,150 respectively. The amount of R3,492,222 was deducted from a refund due to SAMRC. SAMRC has lodged a dispute with SARS for the disallowed output vat and the interest and penalties. The output vat is valid and has been claimed in the 2021/2022 period. SAMRC anticipates to recover the interest and penalties amounting R 664,876 from SARS.

44. Going concern

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business.

	31 MARCH 2024 R	31 MARCH 2023 R
45. Statutory receivables		
The entity had the following statutory receivables where the Framework for the Preparation and Presentation of Financial Statements have been applied:		
Vat receivable	25,439,861	16,208,647

Transaction(s) arising from statute

Value Added Tax Act 89 of 1991.

Determination of transaction amount

The net amount of VAT recoverable from SARS is reflected in the Statement of Financial Position as Vat Receivable.

Interest or other charges levied/charged

The Value Added Tax Act determines the rates and interest is charged.

Basis used to assess and test whether a statutory receivable is impaired

No impairment, the balance is expected to be fully recoverable.

46. B-BBEE Performance

Information on compliance with the B-BBEE Act is included in the annual report under the section titled B-BBEE Compliance Performance Information.

47. Impairment of assets

Impairments

Property, plant and equipment	1,235,223	(1,251,843)
Impairment of (Reversal of previously impaired) property, plant, and equipment were processed during the period under review. Impairment of property, plant and equipment was identified at the year-end by management. Internal indicators such as the research sites/laboratories not being active were key factors in deciding to impair the property, plant and equipment.		

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

48. Comparative figures

Collaborative research costs were previously included with General expenses in the Detailed Income Statement and in the Operating Expenses note 23 and General expenses note 27. The effects of the reclassification in the 2023 figures are as follows: General expenses after reclassification R239,911,953 (Previously stated R797,536,392) and Collaborative research costs after reclassification R557,624,439 (Previously stated RNil).

49. In-kind donations and assistance

During the year under review SAMRC received a donation of laboratory equipment from MGI International Sales Co Limited valued at R20,622,547, the assets have been recognised in terms of GRAP17 in property, plant and equipment.

50. Accounting by principals and agents

The entity is a party to a principal-agent arrangements.

Details of the arrangements are as follows:

The SAMRC was appointed as the project executing agency for funding received from the Government of the Federal Republic of Germany. The Department of Science and Innovation (DSI) as the recipient of the funds will pay SAMRC a management fee for the implementation of the project. It is anticipated that funds approved by DSI and KfW Development Bank for project expenditure will be paid directly to SAMRC.

Entity as agent

Resources held on behalf of the principal(s), but recognised in the entity's own financial statements

The remittance of resources will be for the project implementation costs, during the period no funds were received.

Expected timing of remittance of remaining resources to the principal, are for three years and will be paid in tranches on submission of an approved payment schedule in three monthly intervals.

Risks transferred from the principal to the entity, are the timing of the outflow of funds and the initial costing for the project.

Revenue recognised

The aggregate amount of revenue that the entity recognised as compensation for the transactions carried out on behalf of the principal is R- (2023: R-) as costs have not yet been incurred on the project.

Liabilities and corresponding rights of reimbursement recognised as assets

Liabilities recorded incurred on behalf of the principal(s) that have been recognised by the entity are deferred income recognised for R6M for the contractual amount invoiced to the Department of Science and Innovation.

DETAILED INCOME STATEMENT

	NOTE(S)	31 MARCH 2024 R	31 MARCH 2023 R
Revenue			
Revenue from exchange transactions			
Rendering of services		552,429,032	466,501,867
Rental income		6,208,292	6,661,641
Gain on foreign exchange		1,162,965	8,458,753
Other income		13,277,161	12,910,101
Interest received – investment	22	62,613,758	42,317,948
Fair value adjustments		211,431	–
Dividends received	22	181,529	227,927
Total revenue from exchange transactions		**636,084,168**	**537,078,237**
Revenue from non-exchange transactions			
Transfer revenue			
Government grants & subsidies		660,413,043	677,264,348
Income from contracts and grants (non-exchange)		134,413,603	126,871,219
Total revenue from non-exchange transactions		**794,826,646**	**804,135,567**
Total revenue	20	**1,430,910,814**	**1,341,213,804**
Expenditure			
Employee related costs	24	(551,948,716)	(484,065,156)
Depreciation and amortisation		(32,649,514)	(26,087,381)
(Reversal of impairments) Impairment loss	47	(1,235,223)	1,251,843
Finance costs	25	(371,551)	(293,179)
Lease rentals on operating lease		(3,895,033)	(3,340,910)
Debt Impairment	26	136,828	(356,428)
Fair value adjustments	30	-	(367,464)
General Expenses	27	(268,191,189)	(239,911,953)
Repairs and maintenance		(19,705,477)	(20,384,868)
Collaborative research costs	28	(550,795,556)	(557,624,439)
Surrender of surplus	29	(20,000,000)	-
Loss on disposal of assets and liabilities		(3,621,990)	(2,488,740)
Total expenditure		**(1,452,277,421)**	**(1,333,668,675)**
(Deficit) surplus for the year		**(21,366,607)**	**7,545,129**

The supplementary information presented does not form part of the financial statements and is unaudited.

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