THE SOUTH AFRICAN **MEDICAL RESEARCH COUNCIL**

ANNUAL **REPORT**

2015 **2016**

saMRC
advancing**life**

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FOREWORD BY THE BOARD CHAIRPERSON

PROFESSOR MIKE SATHEKGE: *Board Chairperson*

I am humbled when I think about the year in review and what the South African Medical Research Council (SAMRC) has achieved, and what it still aims to deliver on as South Africa's premier medical research organisation.

Jack Welch, stated that, "an organisation's ability to learn and translate that learning into action rapidly is the ultimate competitive advantage."

I have no doubt that the SAMRC has grown by focusing its resources to confidently develop its competitive advantage in the field of medical research. This organisation has definitive selling points that characterises its ability to conduct its business in a professional, effective and efficient manner. The SAMRC boasts sound corporate governance that assures investors that funds are well managed and directed to the required research.

Building on consecutive clean audits, the organisation has comparatively low overheads, is led by internationally acclaimed medical scientists who conduct their work in state-of-the-art laboratories. The Board is proud about how the leadership and management build sound relations with South African universities and work collaboratively with other research organisations. It really has been a great pleasure for the Board to lead an organisation that has proven its ability to manage complex multinational projects.

In recognising the end of term for the current Board, it is my pleasure to reflect on the year in review, highlighting some of the strategic decisions concluded by the Board and the Executive Management Committee.

In May 2015, the Board approved budgetary adjustments in order to optimise organisational efficiencies. In addition to revising the capital expenditure requirements, a strategic decision was concluded to fund collaborative research for Ebola, cementing working relations with the NICD, NHLS and the SAMRC.

Clinical cancer research centres, HIV prevention research and capacity development also received the strategic support of the Board.
The Board must acknowledge the following significant strategic decisions that will cement the stature of the SAMRC as South Africa's premier medical research organisation:

- Investing in a five-country research study comprising the Canada Institute of Health Research, India, Brazil, China and South Africa to address child obesity
- In October 2015, support was granted to modernise the SAMRC's corporate identity with the strategic intent to optimally communicate its brand, value and mandate

The Board, in its time of tenure, invested time and energy on focusing how best to attract and retain the specialised calibre of staff in and to the organisation.

"It really has been a great pleasure for the Board to lead an organisation that has proven its ability to manage complex multinational projects."

Successful engagements with the Minister's of Health and Finance resulted in approval being granted for a new remuneration system.

It is important for the Board to acknowledge the ability of the organisation to continue to attract global funding in order to deliver its mandate in medical innovation and research. A crucial step was taken by the Board to approve product development and in so doing, increasing the innovative agenda for the organisation.

The Board supported the President's decision to grow and develop young scientists, especially those from historically under-resourced tertiary institutions. This visionary project, which will be implemented over a period of five years, will enjoy an investment in excess of R30 million to benefit the universities of Fort Hare, Walter Sisulu, Limpopo, Venda and Sefako Makgatho. While initial investments have been confirmed, it is the desire of the Board that this project will grow into a long-term deliverable for the organisation and ultimately the country.

I would like to express my sincere gratitude, firstly to the people of South Africa who afford us the opportunity to deliver a mandate so imperative to the social and economic well-being of its people. Without you, the SAMRC would not be able to conduct its research and find interventions and answers to the many challenges our country is faced with.

The Board salutes the leadership of the SAMRC and the staff who continue to make a difference by growing the knowledge economy of South Africa with an unbridled passion for research and development.

Driven and underpinned by two of its three values of pioneering and excellence, the SAMRC staff, in my opinion, can best be described by its third value – collaborative. This organisation optimises collaboration at all levels. Its leadership has consistently received the support from the Ministers of Health and Science and Technology, and has secured the support of both local and global partners by making sure that the medical research mandate is effectively and efficiently delivered on. I thank Honourable Minister Motsoaledi and the Department of Health for ensuring that the SAMRC continues to help build a healthy nation through research.

I wish the incoming Board, SAMRC leadership, staff and its strategic partners all the best in the future. My sincere wish is for the President & CEO to be supported in her ambitious endeavour to grow and catapult this organisation ever forward as she demonstrates courage and great business acumen since having been in office. Finally, permit me to express my gratitude to my colleagues who served with me during the term of the current Board.

Yours faithfully,

PROFESSOR MIKE SATHEKGE

Board Chairperson

FOREWORD BY OUR PRESIDENT

My view of the 2015/16 financial year is one characteristic of extraordinary organisational growth. I am inspired by the leaps of progress delivered on by the Executive and the staff of the South African Medical Research Council (SAMRC), without whom the successes documented in this report would not have been realised.

I am reminded that each collaboration, scientific question posed, research published and medical innovation funded is evidence of our science council's passion and commitment to improve the lives of South Africans. I feel privileged that I am surrounded by the right people, equipped with the right skills who are brave, ambitious and not afraid to explore opportunities for growth and change.

In documenting the deliverables of this financial year, permit me to firstly express my sincere gratitude to the communities without whom our research would not be possible.

Barack Obama stated that, "change will not come if we wait for some other person or some other time. We are the ones we've been waiting for. We are the change that we seek."

Collectively with our communities we are changing the lives of South Africans. It is imperative for me to acknowledge the dedicated support of the Board, Executive Management Committee and more importantly the staff of the SAMRC in contributing to the deliverables documented herein.

As a collective, we are proud to share some of the following major strategic milestones either commenced and/or delivered in the review period:

- Established a dedicated Transformation Forum, which has committed to achieving new transformation targets for our organisation.
- Established a Scientific Advisory Committee to lead strategic oversight
- Through collaborations with Brazil, India, China, Canada and South Africa, a focus on research into childhood obesity has been established
- Secured collaborations with the Gates Foundation to focus on interventions to impact on neonatal mortality and maternal health
- Expanded the strategic research agenda into antimicrobial research
- Significantly increased funding allocated to medical innovation to change the point of care in under resourced community settings
- Introduced the benefit of SAMRC scientists being rated according to the NRF rating system
- Re-aligned our external research funding to address the development of a pipeline of black African scientists

We have focused on transforming the capabilities of the organisation from competent to excellent. It is our collective vision to accelerate science and innovation for social good. Collectively, we will continue to strengthen synergies and partnerships, and in so doing contribute to improving service delivery in South Africa. I am most proud of our investment to grow the next generation of African medical scientists whom I believe will change the landscape in medical innovation and research both nationally and globally.

It is pivotal that we direct funding to answer the most pressing questions related to health research. South Africa has one of the highest burdens of TB in the world. We need to assist the health system to diagnose TB quickly, link those who have TB into care and cure all those diagnosed with TB. To assist the development of greatly needed innovative implementation science to tackle this problem, we announced six new funding grants that will focus on TB research. Together with our UK counterpart (UK MRC), the R70 million funding opportunity, provided by the Newton Fund, will support TB control implementation science over three years.

Our collaboration with the Newton Fund has expanded to non-communicable diseases, and we have partnered with the UK MRC and GSK to investigate the burden of NCDs and the efficacy of our current treatment portfolio to manage NCDs appropriately.

We also had the pleasure in this reporting period to secure a bi-lateral agreement between Sweden and South Africa, which will provide more than R30 million to advance health. We at the SAMRC and our Swedish counterpart, FORTE, concluded strategic talks on how best to invest funds aimed at improving health care in both countries. The bi-lateral agreement serves as a catalyst to bring together scientists to respond to health research funding calls relating to inequalities in health, health systems and health systems policies.

In a year that saw a number of horrific rape attacks make front page news, the SAMRC has demonstrated the ways in which particular notions of masculinity and femininity, as taught in the home, are intertwined with practices of violence and sexual risk. Research by SAMRC scientists indicates that men and boys' adherence to versions of masculinity that privilege dominance, physical strength and high sexual activity, coupled with girls and women's enactment of submissive and soft versions of femininity, have been linked to the social epidemics of violence and HIV. The conscious programming and policy-making for promoting gender equality within families is essential to disrupt harmful gender relations. Additionally, the SAMRC, through its Gender Health Research Unit is tracking violence against women, designing interventions to reduce gender-based violence, and evaluating and adapting proven interventions in new areas.

We understand the huge importance of conducting research that ultimately seeks to tackle the country's top 10 causes of mortality. To this end, the SAMRC is very proud of its continued collaboration with the National Institutes of Health to foster and expand basic, translational, behavioural and applied research to advance scientific discovery among US and African researchers working collaboratively in the areas of HIV/AIDS and TB. The South African–US Program for Collaborative Biomedical Research was established in 2013. In the reporting period, the Program aimed to award 31 grants (a total of $8m) to US and South African scientists to support research targeting HIV/AIDS, TB and HIV-related co-morbidities and cancers.

Sincerely yours

PROFESSOR GLENDA E. GRAY

President and CEO of the South African Medical Research Council

SAMRC: OUR FINANCIAL YEAR IN REVIEW AND FUTURE COMMITMENTS

680 PUBLISHED JOURNAL ARTICLES, BOOK CHAPTERS AND BOOKS with acknowledgement of SAMRC funding support

AWARDED 112 RESEARCH GRANTS for the period reviewed

All 2015/16 publications received an **IMPACT FACTOR GREATER THAN 5**

During the 2015/16 reporting period, **FUNDED 47 RESEARCH UNITS, INCLUDING CENTRES**

Introduced the **FIRST EVER HIV VACCINE TRIAL SITE IN SOUTH AFRICA**

PIONEERS AND LEADS THE AGENDA for new knowledge through innovation and technology

AWARDED 86 BURSARIES, SCHOLARSHIPS AND FELLOWSHIPS to postgraduate students at different universities

Continues to **PROMOTE PRODUCT DEVELOPMENT AND INNOVATION**

47 **YEARS OF REPUTABLE EXPERIENCE** in world class medical research focusing on the 10 causes of mortality in South Africa

602 published indexed high-impact factor journal articles with an SAMRC/MRC/MRCSA affiliated author during the reporting period

COLLABORATES AND PARTNERS WITH WORLD RENOWNED INSTITUTIONS such as the Bill and Melinda Gates Foundation, National Institutes of Health, UK-MRC, Newton Fund and PATH to progress the agenda of medical research in Africa

SAMRC - AN ORGANISATION TO INVEST IN

SOUND CORPORATE GOVERNANCE provides assurance that funds are well managed and directed to the required research

COMPARATIVELY LOW OVERHEADS

STATE-OF-THE-ART LABRATORIES

INTERNATIONALLY RECOGNISED RESEARCHERS

INDEPENDENT ORGANISATION WITH STRONG RELATIONS with SA Universities and other research organisations to foster collaborations

ABILITY TO LEAD AND MANAGE COMPLEX MULTINATIONAL PROJECTS with numerous international partners across multiple currencies and risk profiles

AWARDED THE FOURTH CONSECUTIVE CLEAN AUDIT by the Auditor General of South Africa

COLLABORATES WITH GOVERNMENT DEPARTMENTS AND OTHER INSTITUTIONS TO:

- invest in the development of new knowledge through innovation and technology
- develop capacity of young black scientists from under-resourced universities
- establish in-house funding hub aimed at promoting self-initiated research

PART A
GENERAL INFORMATION

NOTE TO THE READERS

This section of the Annual Report provides an overview of the South African Medical Research Council, and contains the following information.

STRATEGIC OVERVIEW

This information provides the strategic description of why our organisation exists, as well as an overview of our mandate. We include a brief list of our stakeholders, without whom our work would not be possible.

LEGISLATIVE AND OTHER MANDATES

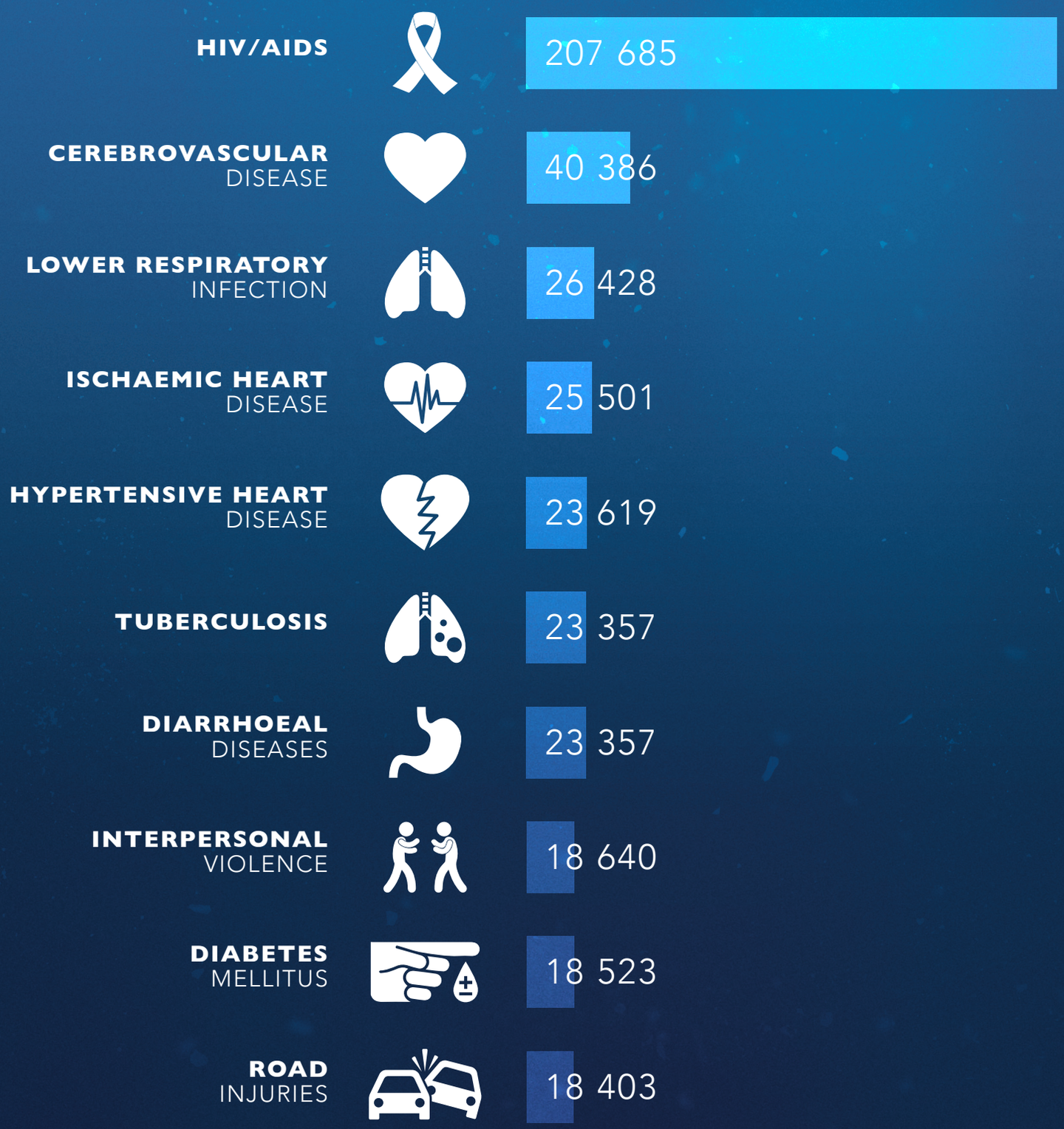
This information outlines the legislative frameworks that govern and direct the manner in which we work and deliver on our mandate.

OTHER RESEARCH UNITS

This section lists the research units that constitute the research programmes. Our research units are made of research teams who deliver on our mandate.

CAUSES OF DEATH ACCORDING TO THE SAMRC SECOND NATIONAL BURDEN OF DISEASE STUDY FOR SOUTH AFRICA

Causes of Death Profile, 1997-2010



OUR STRATEGIC OVERVIEW

The South African Medical Research Council (SAMRC) was established in 1969, and has an obligation to fund and conduct medical research. The SAMRC's mandate is guided by the SAMRC Act, and it also invests financial and human resources into medical research that could lead to drug or vaccine discovery, and affordable diagnostics and devices that beneficially impact the well-being of South Africans.

The scope of the SAMRC's research includes basic laboratory investigations, clinical research and public health studies. Research at the SAMRC focuses on the following top 10 causes of mortality in South Africa:

- HIV/AIDS
- Cerebrovascular disease
- Lower respiratory infection
- Ischaemic heart disease
- Hypertensive heart disease
- Tuberculosis
- Diarrhoeal diseases
- Interpersonal violence
- Diabetes mellitus
- Road injuries

To assist with delivering on this vital mandate, the organisation is led by the National Department of Health, and works with other key stakeholders such as the Department of Science and Technology, South African and international science councils, medical schools, universities, research institutions, and international collaborators.

OUR VISION

Building a healthy nation through research and innovation

OUR MISSION

To improve the nation's health and quality of life by conducting and funding relevant and responsive health research, development, innovation and research translation

OUR MANDATE

The mandate of the South African Medical Research Council, 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.

The three key values of the SAMRC and the keywords relating to each value are the following:

- **PIONEERING** – We push the boundaries between the known and the unknown to further our knowledge of human existence.
- **COLLABORATIVE** – We celebrate the capacity of collective minds towards a common goal.
- **EXCELLENCE** – We strive for distinction in everything we do.

LEGISLATIVE AND OTHER MANDATES

CONSTITUTIONAL

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 an environment that is not harmful to health)
- Section 27 (right to health care, food, water and social security).

In the constitutional context, the outcome of SAMRC research must translate into some tangible/realisable proposition addressing one of the above areas.

To effect the envisaged translation into some tangible/realisable proposition, these constitutional imperatives, set out above, must be reduced into enforceable legal instruments such as contracts, policy documents, standard operating procedures/protocols, and defence or initiation of litigation that meets the relevant statutory and common law regime.

STATUTORY AND OTHER MANDATES

The Legal & Compliance Services Division of the SAMRC has identified 51 Acts of parliament (with 21 of these characterised as primary (i.e. non-compliance therewith or parts thereof would be catastrophic to the business/mandate of the SAMRC). Further to that, seven good practice standards (local and international) have been identified to be applicable to the SAMRC. Finally, 10 regulatory authorities have been identified that 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 SAMRC Act is currently under review. The SAMRC Board, the National Department of Health (NDoH), the National Department of Science & Technology (NDoST), and the Parliamentary Portfolio Committee of Health have been briefed about the contemplated review of the SAMRC Act.
- The Health Act 61 of 2003
- Intellectual Property, Rights from Publicly Financed Research and Development Act of 2008
- Employment Equity Act 55 of 1998
- Basic Conditions of Employment Act 75 of 1997
- Public Finance Management Act (No.1 of 1999 as amended by Act 29 of 1999)
- Relevant Treasury Guidelines
- The Patents Act 57 of 1978
- Copyright Act 98 of 1978 Trade Marks Act 194 of 1993
- Designs Act 195 of 1993
- Implementation of Official Languages Act 12 of 2012

The good practice codes include:

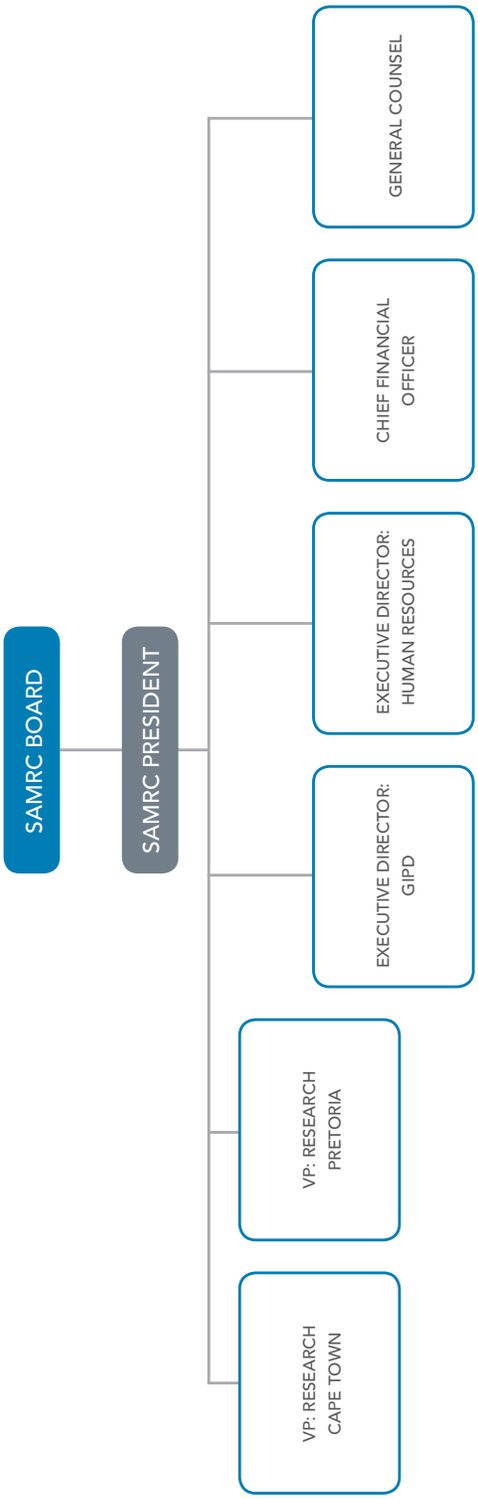
- King Code on Corporate Governance
- Good clinical practices (GCP)
- Good laboratory practices (GLP)

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

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

HIGH LEVEL ORGANISATIONAL STRUCTURE



RESEARCH PROGRAMMES AND UNITS

The following table illustrates the programmes and research units of the SAMRC.

RESEARCH PROGRAMMES	RESEARCH UNITS
HEALTH PROMOTION AND DISEASE PREVENTION NSDA 1: INCREASING LIFE EXPECTANCY	• Alcohol, Tobacco and Other Drug Research Unit • Anxiety and Stress Disorders Research Unit • Non-Communicable Diseases Research Unit • Environment and Health Research Unit • Rural Public Health and Health Transition Research Unit • Violence, Injury and Peace Research Unit • Hypertension and Cardiovascular Disease Research Unit • Microbial Water Quality Monitoring Research Unit
MATERNAL, CHILD AND WOMEN'S HEALTH NSDA 2: DECREASING MATERNAL AND CHILD MORTALITY	• Gender and Health Research Unit • Maternal and Infant Health Care Strategies Research Unit • Development Pathways Research Unit • Child and Adolescent Lung Health
HIV, AIDS, TB AND OTHER COMMUNICABLE DISEASES NSDA 3: COMBATING HIV AND AIDS, AND DECREASING THE BURDEN OF DISEASE FROM TB	• HIV Prevention Research Unit • Centre for Tuberculosis Research Unit • Molecular Mycobacteriology Research Unit • Respiratory and Meningeal Pathogens Research Unit • Diarrhoeal Pathogens Research Unit
HEALTH SYSTEMS STRENGTHENING NSDA 4: STRENGTHENING HEALTH SYSTEM EFFECTIVENESS	• Burden of Disease Research Unit • Biostatistics Research Unit • South African Cochrane Centre • Health Systems Research Unit • Health Policy Research Unit • HIV-TB Pathogenesis and Treatment Research Unit • Health Services to Systems Research Unit
PUBLIC HEALTH INNOVATION	• Drug Discovery and Development Research Unit • Primate Unit and Delft Animal Centre • Medical Imaging Research Unit • The Biomedical Research and Innovation Platform • Herbal Drugs Research Unit
BIOMEDICAL RESEARCH	• Inter-University Cape Heart Research Unit • Receptor Biology Research Unit • Human Genetics Research Unit • Bioinformatics Capacity Development Research Unit • Immunology of Infectious Diseases Research Unit • Stem Cell Research and Therapy Unit • Antiviral Gene Therapy Research Unit

PART B
PERFORMANCE INFORMATION

STATEMENT OF RESPONSIBILITY FOR PERFORMANCE INFORMATION
FOR THE YEAR ENDED 31 MARCH 2016

The President is responsible for the preparation of the South African Medical Research Council's performance information and for the judgements made in this information.

The President is responsible for establishing and implementing a system of internal controls designed to provide reasonable assurance as to the integrity and reliability of performance information.

In my opinion, the performance information fairly reflects the actual achievements against planned objectives, indicators and targets as per the Strategic and Annual Performance Plan of the South African Medical Research Council for the financial year ended 31 March 2016. The South African Medical Research Council's performance information for the year ended 31 March 2016 has been examined by external auditors and their report is presented on page 121.

The performance information of the South African Medical Research Council set out on the following pages has been approved by the Board.

Professor Glenda E. Gray
President and Chief Executive Officer
South African Medical Research Council
31 March 2016

STRATEGIC OUTCOME ORIENTED GOALS

The SAMRC has four strategic goals that link to the four outputs of the health sectors NSDA, which contributes to Outcome 2 'A Long and Healthy Life for all South Africans'. The SAMRC's mandate will be reviewed from time to time and goals will be aligned accordingly.

STRATEGIC GOAL 01	ADMINISTER HEALTH RESEARCH EFFECTIVELY AND EFFICIENTLY IN SOUTH AFRICA
GOAL STATEMENT	Strengthening of financial processes towards an unqualified audit opinion from the Auditor General
STRATEGIC OBJECTIVES	1.1 To ensure good governance, effective administration and compliance with government regulations 1.2 To promote the organisation's administrative efficiency to maximise the funds available for research
OBJECTIVE STATEMENT	To strengthen financial management, monitoring and evaluation
BASELINE (2014–15)	Improved financial management at all levels within the SAMRC and an unqualified audit
INDICATOR/S	1.1 A clean audit opinion on the SAMRC from the Auditor-General 1.2 % of the government allocated SAMRC budget spent on administration

STRATEGIC GOAL 02	LEAD THE GENERATION OF NEW KNOWLEDGE AND FACILITATE ITS TRANSLATION INTO POLICIES AND PRACTICES TO IMPROVE HEALTH
GOAL 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
STRATEGIC OBJECTIVES	2.1 To produce and disseminate new scientific findings and knowledge on health 2.2 To promote scientific excellence and the reputation of South African health research 2.3 To provide leadership in the generation of new knowledge in health 2.4 To facilitate the translation of SAMRC research findings into health policies and practices 2.5 To provide funding for the conduct of health research
OBJECTIVE STATEMENT	Number of high-impact journal articles published during the year to create new quality knowledge through research with expert endorsement from specialists in the field
BASELINE (2014–15)	2.1 400 2.2 100 2.3 10 2.4 160 2.5 4 2.6 100
INDICATOR/S	2.1. Number of published journal articles, book chapters and books by South African Medical Research Council (SAMRC) MRC (Medical Research Council) and Medical Research Council of South Africa (MRCSA) researchers within intramural research units, extramural research units and collaborating centres at the SAMRC (malaria, TB, HIV and cancer and self-initiated research, SHIP and the flagship projects. 2.2 Number of published journal articles by SAMRC/MRC/MRCSA grant-holders during the reporting period, with an acknowledgement of SAMRC/MRC/MRCSA funding support 2.3 Number of published indexed high-impact factor journal articles with an SAMRC/MRC/MRCSA affiliated author. 2.4 Number of journal articles where the first author and or the last author is affiliated to the SAMRCMRC/MRCSA during the reporting period 2.5 Number of new local/international policies and guidelines that reference SAMRC research 2.6 Number of research grants awarded by the SAMRC

STRATEGIC OUTCOME ORIENTED GOALS

The SAMRC has four strategic goals that link to the four outputs of the health sectors NSDA, which contributes to Outcome 2 'A Long and Healthy Life for all South Africans'. The SAMRC's mandate will be reviewed from time to time and goals will be aligned accordingly.

STRATEGIC GOAL 03	SUPPORT INNOVATION AND TECHNOLOGY DEVELOPMENT TO IMPROVE HEALTH
GOAL STATEMENT	Promote the improvement of health and quality of life (prevention of ill health, improvements in public health and treatment) in South Africa through innovation, technology development and transfer
STRATEGIC OBJECTIVES	3.1 To provide funding for health research innovation and technology development
OBJECTIVE STATEMENT	Number of innovations to promote the improvement of health and quality of life in the country through innovation, technology development and transfer (innovation projects supported, invention disclosures, patents filed and licences concluded) developed in the year
BASELINE (2014–15)	30 innovation and technology developments
INDICATOR/S	3.1 Number of innovation and technology projects funded by the SAMRC to develop new diagnostics, devices, vaccines and therapeutics

STRATEGIC GOAL 04	BUILD CAPACITY FOR THE LONG-TERM SUSTAINABILITY OF THE COUNTRY'S HEALTH RESEARCH
GOAL STATEMENT	To provide research support in the broad field of health research, describing original research initiated by a researcher at a recognised research institution, and creating and maintaining collaborative research initiatives in collaboration with Research programmes. The guiding elements for each initiative/project are: long-term and sustainable; focused; strong corrective action; private – public arrangements; Africa centric perspective; innovation; operationally – best business practices; technology infrastructure
STRATEGIC OBJECTIVES	4.1 To enhance the long-term sustainability of health research in South Africa by providing funding for the next generation of health researchers
OBJECTIVE STATEMENT	Study bursaries/scholarships/fellowships are awarded to students towards a postgraduate degree in health research
BASELINE (2014–15)	60 bursaries/scholarships/fellowships
INDICATOR/S	4.1 Number of SAMRC bursaries/scholarships/fellowships provided for post-graduate study at masters, doctoral and post-doctoral levels

THIS SECTION COMPRISES INFORMATION THAT EXPLAINS THE PURPOSE OF EACH PROGRAMME AS DEFINED BY THE ORGANISATION, AND LISTS THE UNITS THAT CONSTITUTE EACH PROGRAMME, ITS DEFINED STRATEGIC OBJECTIVES AND SOME KEY RESEARCH HIGHLIGHTS DELIVERED BY SOME UNITS DURING THE REPORTING PERIOD. EACH PROGRAMME IN THIS SECTION COMPRISES A SELECTED NUMBER OF RESEARCH HIGHLIGHTS.

Research highlights listed in this section are not a comprehensive reflection of the research conducted by the organisation in the reporting period. More information of research conducted by the organisation during the reporting period may be requested.

PROGRAMME 1: HEALTH PROMOTION AND DISEASE PREVENTION

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

- Alcohol, Tobacco and Other Drug Research Unit
- Anxiety and Stress Disorders Research Unit
- Non-Communicable Diseases Research Unit
- Environment and Health Research Unit
- Rural Public Health and Health Transition Research Unit
- Violence, Injury and Peace Research Unit
- Hypertension and Cardiovascular Disease Research Unit
- Microbial Water Quality Monitoring Research Unit

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 areas of health promotion and disease prevention
- To train and mentor high-quality postgraduate students and postdoctoral fellows who are able to 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 health-care 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 look into factors affecting life expectancy
- To train and educate health-care staff and community members to manage, control and reduce the incidence of NCDs

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: ALCOHOL, TOBACCO AND OTHER DRUG RESEARCH UNIT

NAME OF UNIT DIRECTOR: CHARLES PARRY

UNIT INFORMATION

- Burden of disease: Surveillance of alcohol, tobacco and other drug (ATOD) use
- Infectious diseases: Alcohol/drug use and HIV/TB
- Clinical intervention research with vulnerable populations including women, adolescents, and in various settings, including communities, drinking venues, health facilities and the workplace
- Implementation science research: Evaluation and quality improvement of ATOD services
- Maternal and child health: Delinquency and adolescent substance abuse, foetal alcohol spectrum disorders
- Health policy: ATOD use (including over-the-counter and prescription medicines)

WHY IS THE UNIT'S RESEARCH IMPORTANT?

According to the Global Burden of Disease, Injuries and Risk Factor Study 2013 (GBD: 2013; Lancet, 2015), of the 79 behavioural, environmental and metabolic risks in 188 counties, smoking and alcohol use rank 2nd and 6th respectively in terms of DALYs lost. In South Africa, according to GBD 2013, alcohol ranks 3rd after unsafe sex and body-mass index (obesity), and smoking ranks 7th. Drug use was identified in the top 10 risks in South Africa for disease burden in GBD 2010. Together, ATODs have a substantial impact on the major health problems facing South Africa: HIV/AIDS and TB, intentional and unintentional injuries, mental health problems, and non-communicable diseases. The economic and social/development costs of psychoactive substances are also enormous. Information is needed to monitor the nature and extent of ATOD use and its impact on health, and also to inform policy and legislative decisions to address their harms, and inform and evaluate interventions in health, workplace, community and other settings.

MAJOR COLLABORATORS/PARTNERS

- Locally: University of Stellenbosch, University of Cape Town, University of Pretoria, Soul City
- Internationally: RTI International (USA); Oxford University; Virginia Commonwealth University; Boston University; Massey University (NZ); Centre for Addiction & Mental Health, University of Toronto (Canada); Waterford Institute of Technology (IRE); University of North Carolina, New York; University School of Medicine (USA); CRISA/University of UYO (Nigeria), Forut

MAJOR FUNDERS

- Locally: National Department of Health, Western Cape Department of Social Services
- Internationally: NIAAA, NIDA, NICHD, IDRC, EU, UK MRC/Welcome Trust/ DFID, US Centers for Disease Control and Prevention

STUDY

The Male Factor: Outcomes from a Cluster Randomised Field Experiment with a Couples-based HIV Prevention Intervention in a South African Township

PRINCIPAL INVESTIGATOR

Bronwyn Myers

PURPOSE OF THE STUDY

To investigate the type of intervention configuration that will best address intersecting risks within couples (Couples Health CoOp (CHC) arm), such as intervening with couples in a group or separately by gender (comparison arm: women receive the Women's Health CoOp (WHC) and men receive HIV testing and counselling, (2) the WHC/MHC arm in which women receive the Women's Health CoOp (WHC) and men received the Men's Health CoOp (MHC))

FINDINGS

A total of 36 neighbourhoods were mapped and 30 neighbourhoods were selected for randomisation. Of the 290 couples included in this study, intervention completion rates were high, with 99% of the couples in the CHC arm, 89% of the women and 75% of the men in the WHC/MCH arm, and 79% of the women in the comparison arm completing all the intervention sessions. We achieved 93.3% retention over six months. At the six-month follow-up, men in the CHC arm were less likely to report heavy drinking (OR 0.47, 95% CI: 0.25, 0.90) and were more likely to report consistent condom use during the past month (OR 2.66, 95% CI: 1.23, 5.76) than men in the comparison arm. At baseline, 26% of women and 13% of men were HIV-infected; at the six-month follow-up, 16 females and 5 males had seroconverted. HIV incidence was significantly lower among women in the CHC arm (IRR 0.22, 95% CI: 0.04, 1.01) than in the WHC/MHC arm.

WHAT DOES THIS MEAN?

This study tested the efficacy of the Couples Health CoOp intervention on behavioural outcomes among couples in a low-income township in Cape Town. Heavy alcohol use, in combination with traditional gender norms that disempower women, increases HIV risk in couples. A couples-based intervention focusing on intersecting risks for HIV can improve bio-behavioural outcomes, underscoring the importance of engaging couples together in HIV prevention. Further studies regarding the scale-up of such combination interventions in high-risk communities are essential to address HIV gender disparities in South Africa.

STUDY

Masculinities, Alcohol Consumption, and Sexual Risk Behaviour Among Male Tavern Attendees: A Qualitative Study in North-West Province, South Africa

PRINCIPAL INVESTIGATOR

Neo Morojele

PURPOSE OF THE STUDY

To explore the role of constructions of masculinity in men's drinking and sexual risk behaviour in drinking venues (bars and taverns) in two rural villages of North-West Province, South Africa

FINDINGS

Men tended to drink large amounts of alcohol and many men felt that there was pressure on them to demonstrate to their peers that they could tolerate high levels of alcohol use. There was a tendency for women to be blamed by men for the risky sexual behaviours that men engaged in while at the taverns. Furthermore, there was a tendency for men to sexually objectify women. Unlike most women, men preferred to seek short-lived sexual encounters with women and some female participants stated that men manipulated women into having sex with them by making false declarations of affection. In addition, the participants indicated that men would often target and take advantage of women's vulnerability at drinking places.

WHAT DOES THIS MEAN?

Gender transformative programmes need to be implemented to encourage responsible alcohol consumption, minimise sexual risk behaviour in bar settings, and address gender beliefs that normalise and perpetuate sexual harassment and forced sex. These interventions should focus on weakening the link between the perception of masculinity and high levels of alcohol consumption. To address the riskiness of behaviour in drinking venues, there are many ways to create safer communities and drinking venues, including adequate lighting and zero tolerance of violence, and hiring security personnel. In addition, condoms should be freely available, and the use of female condoms should be encouraged and facilitated through demonstrations.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: NON-COMMUNICABLE DISEASES RESEARCH UNIT (NCDRU)

NAME UNIT DIRECTOR: ANDRE PASCAL KENGNE

UNIT INFORMATION

Non-communicable diseases with a major focus:

- Diabetes, cardiovascular diseases and risk factors such as obesity, unhealthy eating habits, physical inactivity and genetic factors
- Chronic kidney diseases

WHY IS THE UNIT'S RESEARCH IMPORTANT?

Non-communicable diseases (NCDs) are a leading cause of death worldwide and in South Africa; with cardiometabolic diseases being the major contributor to NCD-related deaths. Currently, about one in three south African adult men, and two in three women are either obese or overweight, and there are indications that rates are already high in children and adolescents. Even among those surviving from major infectious diseases like HIV/AIDS and tuberculosis, there is now reliable evidence that NCDs have emerged as a new threat to their healthy survival. The cost of NCDs is very high, and evidence suggests that if left unaddressed, NCDs could have severe impact on the economies of developing countries. Therefore, action is needed on NCDs to prevent the devastating consequences on the health of the population and economy of South Africa.

Experience gained from fighting NCDs in the developed world reliably supports that most of the consequences of NCDs can be averted or postponed through prevention actions together with strategies to improve early detection and appropriate management of people with NCDs. For these to be effective in other settings however, locally relevant evidences are needed to contextualise the prevention and control knowledge from elsewhere. NCDRU positions itself at the forefront of knowledge generation to improve the understanding of the burden and determinants, and inform successful health service and policy solutions to improve the prevention, detection, treatment and control of major NCDs in South Africa.

MAJOR COLLABORATORS/PARTNERS

- Locally: University of Johannesburg University of the Witwatersrand, National Department of Health, Council for Scientific and Industrial Research, National Institute for Communicable Diseases, ACCESS, North West University
- Internationally: WHO, IARC, Australia National University, Nagasaki University

MAJOR FUNDERS

- Regionally: Universities in a number of African countries including Uganda, Rwanda, Cameroon, Nigeria
- Locally: National and Provincial Departments of Health, National Research Foundation, Universities across the country
- Internationally: Universities across Europe, Northern America and Australasia, World Health Organisation, International Diabetes Federation, Global Alliance on Chronic Diseases, Global Burden of Diseases Expert Group, Non-Communicable Diseases Risk Consortium

STUDY

Utilising HIV Infrastructures as a Gateway to Hypertension and NCD Care

PRINCIPAL INVESTIGATOR

Andre Pascal Kengne

PURPOSE OF THE STUDY

Quantify the burden and assess the management of the most common cardio-metabolic diseases in people with HIV. Investigate the barriers toward integrating NCDs care in HIV care facilities

FINDINGS

Hypertension is as frequent in people with HIV as in the general population, with about one in three people with HIV across HIV care facilities in Cape Town having hypertension. Among these people already in regular contact with the health-care system, only about four in ten people with hypertension are aware of their status. While most of those diagnosed with hypertension are on some form of treatment, just over half of treated HIV people with hypertension are at target blood pressure control level. The drivers of hypertension in people with HIV appear to be similar to those in the general population, with no indication that characteristics specific to people with HIV, such as the diagnosed duration of the disease, disease severity and treatment, add to hypertension risk. Beside hypertension, risk factors for cardio-metabolic diseases tend to cluster in people with HIV, with over one-quarter of them having metabolic syndrome; with the suggestion that this clustering increases with increasing diagnosed duration of HIV infection.

The enquiry into the experiences and perceptions of health service providers and recipients on delivering and receiving integrated care for HIV and hypertension (and other major NCDs) revealed the following: Reflections on the meaning and implications of integrated HIV and NCD care showed variation between participants from different facilities but also between staff within facilities. While some see it as care provided in fully integrated facilities, others perceive it as integrating NCD care in the existing HIV system. There is an understanding of the different issues that drive the need for integrated care such as benefits to the patient (including reducing stigma) and benefits to the service provider (including optimal clinical treatment). Participants identified various enablers to integrated care such as availability of sufficient NCD-related expertise in the HIV care system but point out that the integration of NCD care in the existing system could mean that far fewer patients would be attended to, should no additional resources be provided.

WHAT DOES THIS MEAN?

- The burden of cardio-metabolic risk factors is high in people with HIV in care, where it is largely under-recognised and unaddressed.
- While integration of chronic care for HIV and major NCDs is seen as an important component of the strategy to reduce the burden of non-infectious co-morbidities in people with HIV, its implementation could be influenced by the availability of resources and physical structures across facilities.

STUDY

Cardiovascular Risk in Black South Africans (CRIBSA) Study

PRINCIPAL INVESTIGATOR

Nasheeta Peer

PURPOSE OF THE STUDY

To determine the prevalence of cardiovascular disease (CVD) risk factors in 2008/09, changes in these risk factors between 1990 and 2008/09, and the association between psychosocial stress and other CVD risk factors in a random sample of the 25–74-year-old urban black population of Cape Town

FINDINGS

- The findings from the CRIBSA study, conducted in 1 099 men and women, show a high prevalence of diabetes (men: 11.3%, women: 14.7%), hypertension (men: 39.3%, women: 39.4%) and raised low-density lipoprotein cholesterol (LDL-C) (men: 37.9%, women: 48.3%) in 2008/09. Furthermore, these rates were much higher than in 1990; diabetes, hypertension and raised LDL-C were, respectively, 1.5 times, 1.6 times and 2–3 fold greater in 2008/09 compared with 1990 in both men and women.
- Overweight/obesity was extremely high in women at 82.9% and higher than in men (28.9%). Between 1990 and 2008/09, overweight/obesity increased in women but, surprisingly, decreased in men. Approximately one in two men were daily smokers (49.4%) and problem drinkers (49.7%). These rates were much lower in women at 7.9% and 18.1%, respectively. However, between 1990 and 2008/09, smoking decreased in men but not in women, while alcohol consumption increased in both sexes.
- Psychosocial stress was significantly associated with diabetes and daily cigarette smoking in women, and with greater alcohol use in both men and women.

WHAT DOES THIS MEAN?

That the prevalence of many CVD risk factors was high in 2008/09 and substantially higher than in 1990, highlights the urgent need for better prevention and control measures. The findings of this study are therefore valuable in raising awareness about the increasing magnitude of the CVD risk-factor burden among policy makers and the public. This will place greater emphasis on these conditions in the required health policy agenda.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: ENVIRONMENT & HEALTH RESEARCH UNIT

NAME OF UNIT DIRECTOR: ANGELA MATHEE

UNIT INFORMATION

The impact of environmental hazards on health (lead poisoning, toxic metals, climate, urban poverty)

WHY IS THE UNIT'S RESEARCH IMPORTANT?

On a global level, environmental exposures account for one-quarter of the burden of disease. This proportion can rise to one-third in settings characterised by under-development such as South Africa. Our country is exposed to multiple driving forces that predispose the population to exposure to a range of environmental health hazards. Amongst these are rapid urbanisation and industrialisation, slow economic growth, high levels of poverty and inequality, and climate change.The consequences of these and other drivers of environmental quality include, for example, inadequate housing, exposure to toxic substances and an increase in extreme weather events.

Climate change, the ramifications of which will be borne by the poorest, is predicted to exacerbate the environmental contribution to ill health.

Scientists in the SAMRC's Environment & Health Research team conduct research to identify and characterise environmental threats to human health, especially amongst the most vulnerable, for example, the youngest and poorest in our society, and use the knowledge to lobby for change for a healthier environment.

MAJOR COLLABORATORS/PARTNERS

- Locally: University of Johannesburg University of the Witwatersrand, National Department of Health, Council for Scientific and Industrial Research, National Institute for Communicable Diseases, ACCESS, North West University
- Internationally: WHO, IARC, Australia National University, Nagasaki University

MAJOR FUNDERS

- Locally: National Department of Health, Western Cape Department of Social Services
- Internationally: NIAAA, NIDA, NICHD, IDRC, EU, UK MRC/Welcome Trust/ DFID, US Centers for Disease Control and Prevention

STUDY

The Environmental Health Situation of International Migrants in Settings of Poverty in Johannesburg

PRINCIPAL INVESTIGATOR

Angela Mathee

PURPOSE OF THE STUDY

This study was undertaken to compare living conditions and the environmental health status of international migrants to South African households, living in settings of poverty in Johannesburg.

FINDINGS

International migrants constitute a group of growing proportion and importance in cities around the world. Many migrants are likely to have encountered exceptional challenges during the migration process, with implications for their health and well-being in the short and longer term. For example, they may have needed to adapt to a foreign culture, a new urban system and language, and may also have experienced trauma in their country of origin. In the destination country, they may similarly encounter trauma, poverty, marginalisation or exclusion. While numerous studies of the environmental health status of international migrants have been undertaken in developing countries, there is a paucity of data in this regard from African settings. In the USA and Europe, migrants have been shown to enjoy better health than native populations (the 'healthy migrant' effect).

Preliminary analyses of the current study data showed that overall there was little change in the proportion of international migrant households in the five study areas of Bertrams, Hillbrow, Riverlea, Braamfischerville and Hospital Hill, although within individual neighbourhoods, changes did occur. For example, the proportion of international migrant households in the study sample in HIllbrow increased from 31% to 46% over a five-year period.

Crude analyses of the total sample showed that overall, the international migrant population appeared to enjoy better socio-economic status, living conditions, food security and health. However, more detailed analyses at the neighbourhood level indicated that within neighbourhoods, there were very few differences between international migrant and indigenous households, and that the environmental health status of international migrants themselves differed significantly across the study sites. In the final analysis, the only differences between South African and international migrant households that remained, after taking account of confounding factors, were a higher level of ownership of household commodities (such as refrigerators, television sets and computers), and a higher regard for local health and police services.

WHAT DOES THIS MEAN?

This study revealed a remarkably similar health status in South African and international migrants in settings of urban poverty in Johannesburg, with little evidence of the 'healthy migrant' effect shown in some developed countries. This may be due to the vast majority of international migrant households in the study originating from an immediate neighbouring country: Zimbabwe. The process of migration from an African country to the USA, for example, may be challenging in terms of cost, the need for social support at the destination and stringent immigration policies. By comparison, the lower hurdles associated with proximity, porous borders, low cost of travel, and relatively easy access to social networks between Zimbabwe and South Africa may not be as self-selecting of high levels of health. Nevertheless, the authors argue for vigilance and a finer understanding of the unique socio-cultural dimensions of health in migrant communities in Johannesburg as they continue to transform the profile of urban health in South African and African cities.

STUDY
Climate and Health

PRINCIPAL INVESTIGATOR
Caradee Wright

PURPOSE OF THE STUDY

Vaccination is an important tool in preventing common infections and is a mainstay of preventive health care. Research has shown that higher levels of sun exposure on the day of vaccination leads to a demonstrable decrease in immune response. Higher levels of sun exposure (measured by latitude/season) have been associated with poorer antibody responses following polio, rubella, measles and BCG vaccinations. Effective vaccination requires the body to mount an immune response so that if that pathogen is encountered again, it will be rapidly deactivated. Although vaccine efficacy is assured by careful manufacturing and maintenance of the cold chain, it has not previously been recognised that sun exposure on or around the day of vaccination can affect the actual, in-practice, effectiveness of vaccinations. Importantly, darker skin pigmentation does not seem to protect against this sun-induced impairment of the immune response to vaccination.

The Department of Health's Expanded Programme on Immunisation allows vaccines to be administered, free of charge, in government primary health-care clinics. In some areas, clinics may have only a small waiting room (or none at all) and patients are required to wait outside in full-sun conditions. In rural areas, patients may walk several kilometres to and from clinics, or have to wait in the sun for public transport.

For this collaborative project between South Africa and Australia (two countries with high ambient solar ultraviolet radiation levels), we received funding from the National Research Foundation and carried out a feasibility study using a clinical trial design, randomising vaccination clinics to receive (or not) sun protection advice and equipment. We recorded which clinics patients visited, vaccination rates (in case providing sun protection at a clinic induces more people to come), uptake and acceptability of sun protection, and level of antibodies (to measles) in both control and intervention groups.

FINDINGS	• The fieldwork for the pilot study concludes around April/May 2016. Preliminary analyses show that the solar UV radiation environment in the study site typically matches the bell-shaped diurnal pattern of low levels in the morning and afternoon, and high levels around midday, with very little interference by clouds. • Temperatures have been extremely high due to the El Nino presently affecting southern Africa, and some heat waves have been experienced in the study site. • Participant understanding of sun protection is low, however uptake of some of the equipment (umbrella) appears to be good.
WHAT DOES THIS MEAN?	• The findings of the main study will ascertain the role of sun exposure in vaccine efficacy in South African settings, and the potential for simple sun protection steps to improve vaccine effectiveness and help optimise the national immunisation programme. • Small changes to sun exposure around the time of vaccination may prove to be important for the success of vaccination programmes, as well as having other benefits, including eye and skin protection against cataracts and skin cancers, respectively. • This study is of particular importance in an era of climate change and in light of the large proportion of our population that is immuno-compromised.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: SAMRC–UNISA VIOLENCE, INJURY AND PEACE RESEARCH UNIT

NAME OF UNIT DIRECTOR: MOHAMED SEEDAT

UNIT INFORMATION

The unit's mandate is to improve the population's health status and quality of life through research and advocacy aimed at promoting safety and peacefulness through the prevention of death, disability and suffering arising from violence and injury. Annually, as many as 3.5 million people seek health care for non-fatal injuries, of which half are due to violence, with injury and harm due to traffic crashes and burns also being significant. Over the course of a lifetime, up to 75% of South Africans experience at least one traumatic event, an astounding cumulative burden and drain on the country's human resources. VIPRU's key research foci is on the development and evaluation of prevention strategies and supportive mechanisms, specifically for the prevention of violence, traffic crashes, and injury and burns. The VIPRU research groups are now organised around three research questions:

- Determinants: What determinant-based interventions work for violence prevention for different settings and groups?
- Innovative methodologies and interventions: What are the methodological and technological innovations required to support prevention?
- Enabling intervention environments: What are the optimal institutional, social and policy environments supportive of science-based prevention?

In addition, a cross-cutting strand focuses on information dissemination, capacity building, outreach and public awareness. A description of past and current activities of VIPRU projects can be found on the VIPRU website: http://www.mrc.ac.za/crime/crime.htm.

WHY IS THE UNIT'S RESEARCH IMPORTANT?

Despite South Africa's remarkable political transformation, the country has continued to experience staggering levels of morbidity and mortality arising from violence and injury. South Africa has one of the highest levels of death and disability from injury in the world. The injury death rate in the country of 158 per 100 000 is twice the global average of 86.9 per 100 000 population and higher than the African average of 139.5 per 100 000. VIPRU draws on critical social science and public health approaches to develop ecologically integrated perspectives to understand the causes of injury and develop local community-centred prevention interventions.

STUDY

Homicidal Strangulation in an Urban South African Context

PRINCIPAL INVESTIGATOR

Shahnaaz Suffla

PURPOSE OF THE STUDY

This DPhil thesis addressed the knowledge gap in the extant literature on lethal violence. The research is aligned with the increasing trend towards disaggregating overall homicide into more defined and conceptually meaningful categories of homicide in order to identify the distinctive characteristics and patterns of the different causes of fatal violence. The study examined the incidence, distribution, individual and situational predictors, and structural determinants of homicidal strangulation in Johannesburg for the period 2001–2010. Specifically, the research examined (1) the extent of homicidal strangulation, and its distribution by characteristics of person, time, place and alcohol consumption; (2) overall homicide strangulation risk in relation to all the other leading causes of homicide; (3) homicidal strangulation risk by gender specifically; and (4) the socio-structural correlates and geographic distributions of fatal strangulation. The research drew from select micro-level and macro-level theories that focus on the intersection between vulnerability and routine activities, and gender and neighbourhood derivatives of violence to explain the social ecology of lethal strangulation.

FINDINGS

The research findings demonstrate that homicidal strangulation in Johannesburg is a unique phenomenon that is distinct from overall homicide. As the fourth leading cause of homicide in Johannesburg, fatal strangulation exhibits a marked female preponderance in victimisation, and a distinctive socio-demographic, spatio-temporal, sex-specific and neighbourhood-level variation in risk. The investigation of individual-level risks revealed sex and age to be the strongest predictors of strangulation. The analysis of spatio-temporal risk indicated that most strangulations occurred during the day and weekdays, with a higher risk for female fatal strangulation in public spaces and a higher risk for males in private spaces. The examination of neighbourhood-level risks for fatal strangulation demonstrated the differential effects of socio-economic disadvantage, residential mobility and female-headed households on homicidal strangulation.

The study may represent one of the first empirical investigations that attempts to offer theoretically derived explanations of homicidal strangulation in South Africa. This research therefore expands the conceptual foundation for understanding the social ecology of strangulation homicide, and makes a valuable contribution to practice and policy imperatives for the mitigation of urban-based homicidal strangulation risks.

WHAT DOES THIS MEAN?

The study findings indicate that fatal strangulation is a multifaceted phenomenon that requires multi-dimensional and multi-level interventions directed at several points of its social ecology.

Prevention programmes that are gender- and age-sensitive are essential for decreasing strangulation risk. Existing prevention initiatives that address violence against women need to be strengthened, and additional evidence-based and gender-specific interventions need to be developed to especially address the distinct risks that predispose females to fatal strangulation. These may include dedicated policing teams, accessible and affordable support services and networks that contribute to the provision of capable guardianship across spatial contexts, and legislation aimed at protecting women. The strengthening of social protection systems that improve the effectiveness of guardianship, provide safety nets, buffer against social isolation, promote cultural norms that emphasise respect for the elderly, and promote positive adult involvement in monitoring and supervising children and adolescents represent important considerations for prevention efforts aimed at these risk groups. As is well established by now, violence prevention initiatives must necessarily incorporate a focus on men and masculinities that challenges the social norms that condone violent masculinities, and thereby address men's perpetration of violence against females, other males, and the elderly and the young.

Universal screening for the physical and psychological manifestations of strangulation within health-care contexts represents an important strategy for recognising, managing and preventing fatal strangulation risk in females, especially given that non-lethal strangulation is a known predictor of fatal violence against women experiencing intimate partner violence. Furthermore, health professionals need to be trained to adequately identify fatal strangulation risk so that they can intervene appropriately in situations that reveal evidence of non-fatal strangulation. Lethality risk assessment tools used in health and social care systems elsewhere in the world have been reported to be useful in identifying risk for victimisation among females, and supporting the implementation of domestic violence prevention programmes to contain the threat of escalating violence leading to a fatal event.

Policy that is city-wide and assumes an inter-sectoral approach to social development is an important tool for addressing the urban conditions that contribute to fatal strangulation risk. Interventions to build and strengthen collective efficacy and community connectedness in dynamic neighbourhood contexts in Johannesburg are potentially valuable in promoting community solidarity, social cohesion and social inclusion, and thereby strengthening neighbourhood safety nets and protective mechanisms that moderate risk of fatal violence.

STUDY

The Invisibility of Men in South African Violence Prevention Policy: National Prioritisation, Male Vulnerability and Framing Prevention

PRINCIPAL INVESTIGATOR

Ashley Van Niekerk

PURPOSE OF THE STUDY

South Africa has a significant violence problem. The exposure of girls and women to interpersonal violence is widespread, and the victimisation of men, especially to severe and homicidal forms of aggression, is of considerable concern, with male homicide being eight times the global rate. There has, in the last two decades, been a plethora of South African policies to promote safety. However, indications suggest that the policy response to violence is not coherently formulated, comprehensive or evenly implemented. This study examines selected South African national legislative instruments' framing and definition of violence and its typology, vulnerable populations, and prevention.

FINDINGS

- South African legislative documents recognised the high levels of violence, confirmed the prioritisation of selected vulnerable groups, especially women, children, disabled persons and rural populations, and above all, drew on criminological perspectives to emphasise tertiary prevention interventions.
- Despite the complexities of violence prevention and the global call for multi-sectoral national action plans, the South African legislative responses are, in crucial aspects, partial and limited in scope.
- Although responses have rightfully placed the accent on women and children, they have tended to neglect the implications arising from the over-concentration of males in violent victimisation and perpetration.

WHAT DOES THIS MEAN?

- In light of persisting high rates of violence, South Africa needs to continue with prioritising and intensifying violence prevention. At the same time, there is a clear need for much closer integration of violence prevention policies and programming because violence is a multi-faceted problem that has far-reaching consequences in various spheres of social, community and personal life.
- Given research and police reports indicating that men's violence is directed at women, children, as well as other men, it is important to underline the need to continue to develop policies and programmes that focus on women and children as being vulnerable to violence victimisation.
- Policies need to recognise men as a further group vulnerable to violence, and severe forms of violence in particular. At a tertiary level, services that cater for male victims of violence need to be developed and implemented.
- In order to meaningfully reduce rates of violence, there is also a need for policies to expand the focus on primary prevention initiatives. For example, there is a need to develop programmes focused on disrupting notions and practices of masculinity that position 'demonstrations of toughness, bravery and defence of honour, which readily translate into risk-taking behaviours and the high status gained by fighting rather than to resolve differences peacefully' in order to reduce rates of violence perpetration, as well as victimisation, by men.
- Programmes focused on disrupting problematic notions of masculinity have to encourage men to access services (at both a primary and tertiary level) designed to offer support for victims (and perpetrators) of violence.

PROGRAMME 2: MATERNAL, CHILD AND WOMEN'S HEALTH

PURPOSE OF THE PROGRAMME

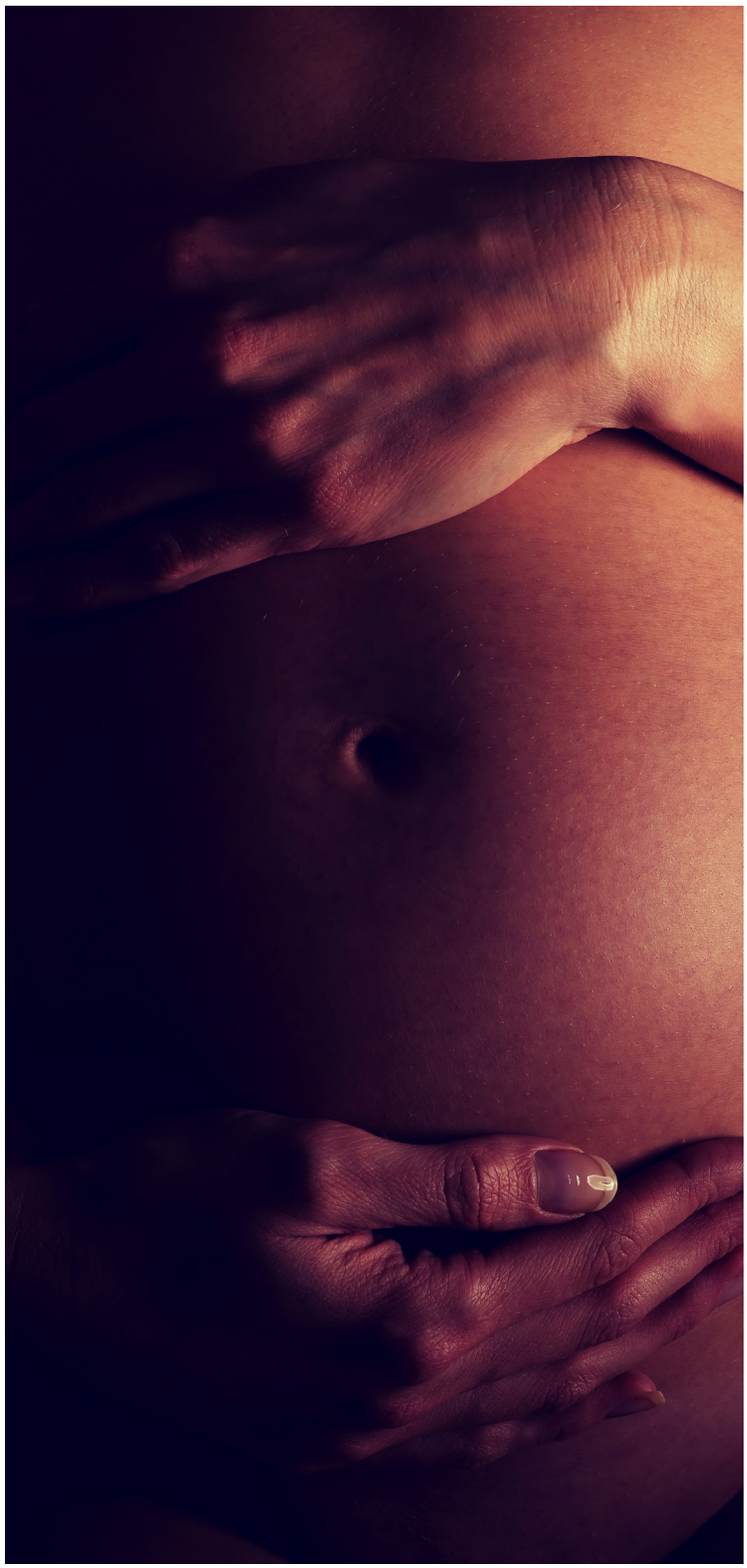
To improve the health status and quality of life of women and children through high-quality scientific research that informs policy and practice, improves health services and promotes health

UNITS THAT CONSTITUTE THIS PROGRAMME

- Gender and Health Research Unit
- Maternal and Infant Health Care Strategies Research Unit
- Development Pathways Research Unit
- Child and Adolescent Lung Health

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, and 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 preventing gender-based violence for testing and evaluating 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



SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: GENDER & HEALTH RESEARCH UNIT

NAME OF UNIT DIRECTOR: RACHEL JEWKES

UNIT INFORMATION

Gender and health, particularly violence against women and girls

WHY IS THE UNIT'S RESEARCH IMPORTANT?

Over 50 000 people in South Africa report rape each year to the police and research shows that one-third of women have experienced physical or sexual violence from an intimate partner and half of men report having used violence against a partner. In some areas of the country, up to one-third of women report being raped each year. Physical, sexual and emotional abuse of children are also widespread. Interpersonal violence is the second leading cause of healthy years of life lost (after unsafe sex) in South Africa and in women, IPV accounts for 50% and child sexual abuse for 32% of these. It is a key driver of the HIV epidemic, responsible for up to one-quarter of new infections in young women, and a major cause of mental ill health. The Unit's research focuses on understanding drivers of violence, its health consequences to inform services, performance of services/responses in the health and criminal justice sectors, and prevention of violence occurring.

STUDY
Sexual Violence Research Initiative (SVRI)

PRINCIPAL INVESTIGATOR
Elizabeth Dartnall

PURPOSE OF THE STUDY

The SAMRC hosts the SVRI–one of the largest networks of research on sexual violence globally. The SVRI promotes high–quality research on sexual violence in low- and middle-income countries by bringing together a wide range of partners to discuss best practice and new evidence for programming to address sexual violence and intimate partner violence against women in low- and middle-income countries.

Key objectives

- Increase awareness of sexual violence as a priority public health problem through evidence-based communication and information
- Build capacity in sexual violence research
- Improve knowledge of sexual violence internationally to influence policy and service delivery
- Promote donor and researcher involvement in supporting and undertaking research on sexual violence

Key Activities

- SVRI forums and events
- SVRI granting mechanisms
- SVRI information hub and sharing platforms
- SVRI capacity building
- SVRI publications

FINDINGS

KEY ACHIEVEMENTS 2015 / 2016

SVRI Forum 2015: SVRIs global biannual conference – the SVRI Forum – is a vibrant, informative and safe space for researchers, civil society, policy-makers, donors and others to share and learn about the most current and cutting-edge research the field has to offer on sexual, and other forms of violence against women and children. SVRI Forums are the go-to event in the field – for many of us it is the most anticipated event in our calendar. Our fourth international conference, SVRI Forum 2015, was held from 14–17 September in Stellenbosch, South Africa. With 398 participants representing over 40 countries, this Forum was the biggest and most exciting conference hosted by the SVRI yet.

SVRI Grant: The SVRI Grant, a global innovation grant begun in 2014, has awarded more than US$1 million to nine projects in seven countries. In 2016, the SVRI and the World Bank Group partnered on the SVRI World Bank Development Marketplace for Innovation on GBV Prevention, through which US$1.2 million has been granted for nine projects in Bangladesh, Moldova, Kenya, Uganda, Brazil, Thailand, Peru, Turkey and Syria. Winning grantees were presented with their awards at a high-level ceremony held in Washington in April. A video of the ceremony is available.

SVRI information hub and sharing platforms: SVRI website revitalised and relaunched. Created a Blog site. Social media becoming key method of communicating & disseminating data. @TheSVRI's Twitter following has increased by 56% in the last year with 1 390 followers in September 2015; Facebook likes increased by 79% since Sept 2014 – Aug 2015. SVRI Listserv – global membership of over 4 000 members.

SVRI capacity building: From 2013–2015, SVRI worked with four teams in three countries (Kenya, Uganda and Tanzania) to build capacity and evidence for primary prevention in east Africa through developing adapting and testing parenting and or school strengthening interventions. http://www.svri.org/svri-primary-prevention-project

SVRI Publications:

- SVRI Forum 2015 pre-conference workshop reflections: Building and sustaining fruitful partnerships between activists and researchers. Anik Gevers (Independent Consultant) & Sophie Namy (Raising Voices), 2016
- The role of faith based organisations in preventing and responding to sexual, intimate partner and gender-based violence in conflict settings: A modified critical interpretive synthesis. Magner K, Desrosiers J.E, Blunt I, Hawken T and Brick E. University of Otago for the Sexual Violence Research Initiative. SVRI, 2015
- Briefing Paper: Building capacity for SIPV primary prevention research and intervention development in Sub-Saharan Africa - Lessons learned. Dartnall E and Gevers A. SVRI, 2015
- Guidelines for the prevention and management of vicarious trauma among researchers of sexual and intimate partner violence. Sexual Violence Research Initiative, 2015
- Guest editor - 'Stopping violence before it starts' South African Crime Quarterly 51, 26 March 2015. https://www.issafrica.org/about-us/press-releases/violence-prevention-starts-at-home

WHAT DOES THIS MEAN?

SVRI activities and actions during 2015/2016 generated a wealth of knowledge and new ideas for building the field of sexual violence and other forms of violence against women and children. Some lessons and actions arising from our work include the need to continue to:

- strengthen the evidence base on prevalence and drivers of SIPV and other forms of violence against women and children, and how they inform the development and or adaptation of locally relevant, prevention and response strategies
- build expertise in research methods and practice to develop a cadre of researchers doing excellent, rigorous research that can be used to influence policy and programme development,
- build capacity for and promote research uptake, to ensure that evidence is available to and used by policy makers, service providers and programme practitioners.

Feedback from SVRI partners and beneficiaries on our work:

- SVRI Grant and SVRI WBG Development Marketplace for Innovation on GBV Prevention – quotes:
  - "With these awards, we hope to spark further innovation to prevent gender-based violence," World Bank Group President Jim Yong Kim said. "Gender-based violence exists in every region, every sector, and every socioeconomic stratum, but we now have a growing body of evidence that it can be prevented." [Source: WBG]
  - "By pooling resources and working together on the Awards, the SVRI and World Bank Group have identified a global portfolio of superb innovators," SVRI Programme Manager Elizabeth Dartnall said. "This process and award ceremony opens the door for award winners to access policy-makers, paving the way for durable solutions for the field—helping us to build a world in which children and women live free from violence." [Source: WBG]
- SVRI Forum 2015 – quotes:
  - "The vibe and the energy of this meeting is really special and we hope it continues and it grows" Claudia Garcia-Moreno, WHO
  - "By far the best part of the SVRI Forum is connecting with colleagues, researchers and practitioners around the world. This is the only Forum in the world for doing so." SVRI Forum 2015 participant
  - "…SVRI Forum is an ideal platform to highlight all the work that is being done in the world around this subject. I like that it pulls researchers from everywhere working in diverse parts of the world to support SGBV. This was an ideal step for a new entrant to acquaint oneself with the field." SVRI Forum 2015 participant

STUDY

What Works to Prevent Violence? A Global Programme to Prevent Violence Against Women and Girls

PRINCIPAL INVESTIGATOR

Rechel Jewkes

PURPOSE OF THE STUDY

To generate knowledge on:

- drivers of VAWG
- What Works to Prevent Violence
- Costs and cost effectiveness of intervention.

And to use the knowledge to include policies and programming, and use the research opportunity to strengthen southern research capacity.

FINDINGS

What Works To Prevent Violence Against Women and Girls? The global programme is a five-year programme (ending November 2018) funded by the UK Government's DFID, which is managed by the Gender & Health Research Unit of the SAMRC. This programme involves undertaking and supporting interventions and research to prevent VAWG in 17 countries of Africa, MENA and Asia. The programme is funding 10 innovative projects that are developing and strengthening interventions based on research and intervention theory, five of which are being subject to rigorous outcomes evaluation with randomised controlled trial or quasi-experimental research designs. Additionly, the programme is evaluating seven more established interventions in randomised controlled trials. The interventions include gender and economic empowerment interventions for women of different types, community-based social norms based interventions, school-based interventions to empower children in peace education, through play and through self-defence, a psychotherapeutic intervention, couples interventions and interventions using mass media including TV and radio programming. The settings include low- and middle -income countries and conflict/fragile settings. In the year 2015-16 we have completed the formative research phase for several of the projects, focused on intervention development and strengthening, and commenced study design and baseline research for many of the trials.

WHAT DOES THIS MEAN?

This is the largest single investment ever made in knowledge generation around VAWG prevention in low- and middle-income settings. The programme will produce research findings over the next three years, but is intended to substantially advance the global evidence base

PROGRAMME 3: HIV, AIDS, TB AND OTHER COMMUNICABLE DISEASES

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, carry out the AIDS Vaccine Project through coordinating development and testing of HIV vaccines in South Africa, in partnership with our funders and our regional counterparts.

UNITS THAT CONSTITUTE THIS PROGRAMME

- HIV Prevention Research Unit
- Centre for Tuberculosis Research Unit
- Molecular Mycobacteriology Research Unit
- Respiratory and Meningeal Pathogens Research Unit
- Diarrhoeal Pathogens Research Unit

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 the European and Developing Countries Clinical Trials Partnership (EDCTP) TESA's mandate, and to 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 retaining 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

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: HIV PREVENTION RESEARCH UNIT

NAME OF UNIT DIRECTOR: GITA RAMJEE

UNIT INFORMATION

Infectious diseases : HIV

WHY IS THE UNIT'S RESEARCH IMPORTANT?

Women bear the brunt of the burden of HIV infection in sub-Saharan Africa. Young women of reproductive age remain at the highest risk of HIV acquisition. The province of KwaZulu-Natal is the epicentre of the HIV pandemic in the world. It is therefore a public health imperative to address the growing incidence of HIV among young women through biomedical, behavioural and structural interventions. Our research focus has been to test biomedical women-initiated HIV prevention interventions that empower women, as well as gaining a better understanding of the socio-behavioural, cultural and structural factors that impact on their sexual and reproductive health.

MAJOR COLLABORATORS/FUNDERS/PARTNERS

- Regionally: Zimbabwe, Uganda, Malawi
- Locally: Department of Health, UKZN, CAPRISA, WRHI, Desmond Tutu Foundation, other SAMRC units
- Internationally: National Institutes of Health, Microbicide Trials Network, HIV Vaccine Trials Network, RTI International, University of Columbia, University of Washington, Seattle, University of Pittsburgh

STUDY

MTN020 (ASPIRE): A Multi-Centre, Randomised, Double-Blind, Placebo-Controlled Phase 3 Safety and Effectiveness Trial of a Vaginal Matrix Ring Containing Dapivirine for the Prevention of HIV-1 Infection in Women

PRINCIPAL INVESTIGATOR

Vaneshree Govender

PURPOSE OF THE STUDY

To assess the safety and efficacy of the dapivirine (25 mg) vaginal ring when inserted once every four weeks in preventing HIV-1 infection among healthy, sexually active, HIV-uninfected women

FINDINGS

MTN-020 was a phase 3, randomised, double-blind, placebo-controlled trial of a monthly vaginal ring containing dapivirine, a non-nucleoside HIV-1 reverse-transcriptase inhibitor. A total of 2 629 women, between the ages of 18 and 45 years, from Malawi, South Africa, Uganda and Zimbabwe were enrolled in the study. The six SAMRC HPRU clinical research sites contributed 803 of the total women enrolled. A total of 68 HIV-1 infections occurred: 71 in the dapivirine group and 97 in the placebo group (incidence, 3.3 and 4.5 per 100 person years, respectively). HIV-1 incidence in the dapivirine group was 27% lower (95% confidence interval (CI), 1 to 46; $p = 0.05$) than that in the placebo group. Further analysis, which was conducted after excluding data from two sites that had lower retention and adherence rates, showed that HIV-1 incidence in the dapivirine group was lower by 37% (95% CI, 12 to 56; $p = 0.007$) than that in the placebo group. In subgroup analyses, HIV-1 protection differed significantly by age, with women ≥25 years demonstrating substantial HIV-1 protection (61% (CI: 32%, 77%)), while the younger age group (<25 years) had no statistically significant reduction in incidence (10% (CI: –41%, 43%)). Additional analyses performed to further explore these results found that the lack of HIV-1 protection, along with lower adherence, was limited to those ≤21 years of age (reduced risk of HIV acquisition was –27% (CI: –133%, 31%), and for those >21 years of age, reduced risk of HIV acquisition was 56% (CI: 31%, 71%, $p < 0.001$). In summary, the study demonstrated that the monthly dapivirine vaginal ring is safe and can reduce the risk of HIV-1 infection when used. Protection was greater in subgroups with evidence of better adherence to ring use.

WHAT DOES THIS MEAN?

For the first time in the history of microbicide research, an open-label extension trial that is designed to provide former MTN-020 participants access to the dapivirine ring has been approved. The International Partnership for Microbicides (IPM) is in the process of preparing a dossier on the monthly dapivirine ring for submission to regulatory authorities, with the aim of registering the ring as an HIV-1 infection prevention intervention for women. This product will have a huge public health impact in preventing HIV among women.

STUDY

A Phase 1–2 Randomised, Double-Blind, Placebo-Controlled Clinical Trial of Clade C ALVAC-HIV (vCP2438) and Bivalent Subtype C gp120/MF59® in HIV-Uninfected Adults at Low Risk of HIV Infection (HVTN100)

PRINCIPAL INVESTIGATOR

Brodie Daniels

PURPOSE OF THE STUDY

- To evaluate the safety and tolerability of two doses of ALVAC-HIV (vCP2438) followed by two doses of ALVAC-HIV (vCP2438) plus Bivalent Subtype C gp120/MF59® in HIV-seronegative low-risk South African adults
- To evaluate the immunogenicity of two doses of ALVAC-HIV (vCP2438) followed by two doses of ALVAC-HIV (vCP2438) plus Bivalent Subtype C gp120/MF59® in HIV-seronegative low-risk South African adults at the 6.5 month time point (two weeks after completion of the primary immunisation series)

FINDINGS

Study activation was received on 13 February 2015. The Isipingo clinical research site (CRS) screened their first participant on 20 February 2015 and enrolled their first participant on 11 March 2015. The last participant was enrolled on 22 May 2015. A total of 42 participants (11 males, 30 females and 1 transgender person) were enrolled at the CRS. Participants are currently in follow-up. All study participants have completed, or are scheduled to complete, their week 39 visit (month 9). Retention for study visits has varied between 90% and 100%, with 95% retention for all vaccination visits to date. All study visits will be completed by the end of December 2016 and final study results are expected in 2017.

WHAT DOES THIS MEAN?

The HVTN 100 trial is building on the results of the RV144 trial in Thailand, in which participants who received the vaccine were 31.2% less likely to be infected with HIV after a period of 3.5 years than participants who received a placebo. However, the vaccine showed an even higher efficacy (approximately 60%) one year after vaccination. The products from RV144 have been modified to reflect HIV subtype C prevalent in the southern African region for the HVTN 100 trial. Based on the safety and immunogenicity data generated by HVTN 100, the same products will be used in a large, phase 2b/3 study to evaluate the safety and efficacy of these products.

STUDY

The Evaluation of KIR: HLA Genes in HIV-1 Clade C Infection: Key components to HIV Vaccine Design

PRINCIPAL INVESTIGATOR

Photini Kiepiela

PURPOSE OF THE STUDY

The overall aim of the study is to describe the HLA and/or KIR gene combinations in HIV-infected and uninfected women, and their impact on subsequent HIV-1 disease progression, i.e. slow or rapid progression.

This study proposes to determine the relationship in KIR: HLA genes between individuals who are HIV-1 negative compared to those who are HIV-1 positive infected with C-clade, as well as the following:

- Examine the association between KIR gene number (total, activating, inhibitory) and ratio (inhibitory to activating genes), either in isolation or in combination with their HLA ligand, in individuals remaining uninfected despite high HIV clade C exposure
- Examine the association between KIR gene number (total, activating, inhibitory) and KIR gene ratio (inhibitory to activating genes), either in isolation or combination, with their HLA ligand and viral set point in HIV-1 infected individuals

FINDINGS

C1 homozygosity, alone or in combination with 2DS2 or homozygous 2DL3, as well as possession of at least one C1 ligand in combination with 2DL2, 2DL3 or heterozygous 2DL2/2DL3, was associated with a significantly slower time to seroconversion (Table 1), and with the exception of 2DL2/C1, was also associated with resistance. C2 homozygosity, alone or in combination with homozygous 2DL3, had a significantly higher representation in HIV-infected individuals and was also associated with more rapid HIV acquisition. 2DS1, in combination with HLA B Bw480TA ligands or homozygous C2, was associated with faster seroconversion. We did not observe a significant association between possession of 2DL5, 2DS5 or 3DS1 with acquisition or time to seroconversion.

Table 1: The frequency and effect of KIR: HLA genotypes on time to HIV seroconversion

	PERCENTAGE REPRESENTATION			TIME TO SEROCONVERSION
	HIV-EXPOSED SERONEGATIVE	SEROCONVERTERS	P-VALUE	HR (95% CI)
PROTECTIVE				
C1C1	51%	26%	<0.001*	0.38 (0.28–0.52)
2DL2/C1	49%	41%	0.0606	0.75 (0.57–0.98)
2DL3/C1	57%	42%	<0.001*	0.60 (0.45–0.78)
2DL2/C1C1	32%	18%	<0.001*	0.48 (0.34–0.69)
2DL3/C1C1	39%	20%	<0.001*	0.41 (0.29–0.58)
2DL32DL3/C1C1	15%	8%	0.007	0.51 (0.30–0.84)
2DS2/C1C1	26%	15%	<0.001*	0.50 (0.34–0.74)
2DL22DL3 /C1	33%	25%	0.035	0.71 (0.52–0.96)
2DL22DL3 /C1C1	24%	12%	<0.001*	0.45 (0.30–0.69)
ACQUISITION				
C2C2	15%	24%	0.003*	1.60 (1.17–2.19)
2DL32DL3/C2C2	5%	11%	0.001*	1.98 (1.31–3.01)
2DS1/C2C2	1%	3%	0.070	2.43 (1.14–5.17)
2DS1/Bw480TA	1%	3%	0.070	2.39 (1.12–5.08)

WHAT DOES THIS MEAN?

A potential protective role of HLA C1 ligands, alone or in combination with KIRs 2DL2, 2DL3 and 2DS2, was identified in both HIV-1 acquisition and longer time to seroconversion. Similarly, there was a higher risk of acquisition and shorter time to seroconversion in individuals who possessed C2 ligands only or in combination with 2DL3, while 2DS1 in combination with C2 or Bw4-80TA ligands may reduce time to seroconversion. This data contributes to the understanding of the role of the NK cells in modulating resistance to HIV-1 acquisition.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: CENTRE FOR TUBERCULOSIS RESEARCH

NAME OF UNIT DIRECTOR: PAUL VAN HELDEN

UNIT INFORMATION

Communicable Diseases: Tuberculosis

WHY IS THE UNIT'S RESEARCH IMPORTANT?

TB ranks in the top five in terms of burden of disease in South Africa, whereas in many other countries, it is ranked far lower in priority. It is therefore essential that we devote much attention to this disease locally.

The Centre for TB Research exists as a multidisciplinary centre of excellence to lead tuberculosis research through innovation, and the provision of knowledge to and training of new graduate scientists to satisfy the needs of the research community and national health programme. We study TB at a molecular and cellular level in order to ultimately transfer knowledge gained to benefit the health of the community. We endeavour to research a continuum from basic research to applied technology.

Our work encompasses working directly with the bacillus itself, to understand its weak points, and to better develop therapy and diagnostics. In addition, we study host immunology and human genetics, with the view that such knowledge will eventually allow us to assist the host (humans) combat infection. We are actively involved in searching for new antibiotics and conducting clinical trials for new treatment options or vaccines to try to improve prevention and therapy. In this process, we also work on animal TB, which is also a problem in South Africa, not only for animals, but also for humans as well.

MAJOR COLLABORATORS/FUNDERS/PARTNERS

- Regional: UCT and UWC
- Local: SAMRC, Stellenbosch University and NRF, UKZN, K-Rith, WITS and other HEIs, NHLS
- International: BMGF and NIH, institutions in at least eight different African countries, a number of European countries, Canada, USA, Ireland and UK.

STUDY

Whole Genome Sequencing Reveals Genomic Heterogeneity and Antibiotic Purification in Mycobacterium Tuberculosis Isolates

PRINCIPAL INVESTIGATOR

Robin Warren

PURPOSE OF THE STUDY

To reliably detect genetic variation in whole genome sequencing data and apply this to understand genome evolution during drug treatment

FINDINGS

Recent studies have reported conflicting findings on the genomic stability of *M. tuberculosis* during the evolution of drug resistance. Current approaches to analysing genome sequence data may fail to detect important small sub-populations due to overly strict analysis criteria. In addition, the way in which samples are prepared from patient sputum may not reflect the true diversity of the bacterial populations in the sputum. In this study, we aimed to define a reliable cut-off for identifying low-frequency sequence variants, and to subsequently investigate genetic heterogeneity and the evolution of drug resistance in *M. tuberculosis.* Our data enabled us to define criteria to accurately detect heterogeneous (mixed) variants. Using this approach, we demonstrated, for the first time, high genetic diversity between single colonies isolated from clinical samples. Thereafter, we used these criteria to investigate the evolution of drug resistance in *M. tuberculosis* clinical isolates, focusing on isoniazid, an important first-line anti-TB drug. Our findings suggest that when patients are first started on isoniazid treatment, this results in an initial reduction in genetic diversity. However, over time, new variants accumulate within the total population. The findings of this study demonstrate the presence of numerous sub-populations present within an *M. tuberculosis* clinical isolate, suggesting that the population is dynamic in preparing to respond to a changing environment.

WHAT DOES THIS MEAN?

These findings have important implications for the development of new diagnostic techniques because it is also vital to identify drug resistance-causing mutations present in a small sub-population. These findings lay a foundation for understanding the population biology of M. tuberculosis during disease. In addition, this study highlights the importance of the sequence read depth obtained using next generation WGS. In order to adequately and reliably detect true drug resistance mutations, it is vital to obtain maximum read depth and quality.

STUDY

Host Susceptibility to Tuberculosis

PRINCIPAL INVESTIGATOR

Muneeb Salie

PURPOSE OF THE STUDY

We investigated the role of killer immunoglobulin-like receptor (KIR) genes and human leukocyte antigen class-I (HLA) variants in susceptibility to tuberculosis in a South African population.

FINDINGS

In a sample set comprising 408 TB cases and 351 healthy controls, we showed that the KIR3DS1 gene and KIR genotypes with five or more activating KIRs, and the presence of 3DS1, protect against developing active TB in the South African coloured population. Several HLA class-I alleles were identified as susceptibility factors for TB.

WHAT DOES THIS MEAN?

Natural killer (NK) cell activity and cytokine production is largely regulated by the KIRs and their HLA ligands, and NK cells mediate programmed cell death through the release of cytotoxic granules that penetrate the cell membrane of infected cells. Our data suggests that the KIR genes protect against developing active TB in the South African population.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: OFFICE OF MALARIA RESEARCH

NAME OF UNIT DIRECTOR: RAJENDRA MAHARAJ

UNIT INFORMATION

The key area of focus of the Office is malaria. Of particular interest is the development of innovative new vector control tools and methods to diminish malaria transmission in the malaria endemic provinces of South Africa. Of particular interest is the issue of residual malaria, which is driving the low-level transmission of malaria in KwaZulu-Natal and the identification of malaria foci in the worst affected province, namely Limpopo Province.

WHY IS THE UNIT'S RESEARCH IMPORTANT?

In 2011, the National Department of Health embarked on its malaria elimination campaign and since then, the malaria incidence in the country has fallen to below 1 case per 1 000, which is the WHO criteria for initiating an elimination agenda. However, there are many gaps in our knowledge of the vector and parasites as well as the host-parasite interaction. For this reason, a priority research agenda was created to guide malaria research in the country.

The MRC Office of Malaria Research (MOMR) has the mandate of supporting malaria elimination efforts within the SADC region in alignment with the National Department of Health's goal of malaria elimination by 2020. The objectives of MOMR are to:

- promote the MOMR's administrative efficiency to maximise the funds available for research
- synthesise evidence and influence the management of malaria eradication initiatives.

The MOMR aims to produce and disseminate new scientific findings and knowledge on malaria by contributing to a body of evidence to enhance understanding on how to prevent, control and eradicate malaria.

MAJOR COLLABORATORS/FUNDERS/PARTNERS

Locally: National Department of Health Malaria Directorate, Malaria Control Programmes in KwaZulu-Natal, Limpopo and Mpumalanga, Department of Agriculture – Registrar of Insecticides, Universities of Pretoria, Witwatersrand, Cape Town, KwaZulu-Natal, Applied Centre for Climate and Earth Systems (ACCESS), CSIR, National Institute for Communicable Disease , Africa Fighting Malaria, South African National Defence Force, Insecticide manufacturers : Avima, Bayer, Syngenta, Sumitomo,

Regionally: MoSaSwa Initiative (between Mozambique, South Africa and Swaziland) SARN (Southern African Roll back Malaria Network), Goodbye Malaria, Nandos Foundation, Ministry of Health Swaziland, Ministry of Health Mozambique

Internationally: University of Nagasaki, London School of Hygiene and Tropical Medicine, Malaria Elimination Initiative-Global Health Group, University of California, San Francisco, Manhica Health Research Centre, Mozambique, WHO, United Nations Environment Programme, International Atomic Energy Association, Global Fund, Clinton Health Access Initiative (CHAI), Swiss TPH

STUDY

Identification of compounds in *Olax dissitiflora* with larvicidal effect against *Anopheles arabiensis*

PRINCIPAL INVESTIGATOR

E.J Mavundza

PURPOSE OF THE STUDY

- To evaluate the larvicidal effect of isolated compounds found in in *Olax dissitiflora* against the *Anopheles arabiensis* mosquito
- To find new larvicides that are safe, effective, biodegradable and target specific

FINDINGS

Bioassay-guided fractionation of the dichloromethane extract of *O.dissitiflora* led to the isolation of one pure compound (santalbic acid) and a mixture of two closely related compounds (exocarpic acid and octadec-9,11-diynoic acid). Although previously isolated from other sources, exocarpic acid and octadec-9,11-diynoic acid were isolated for the first time from *O.dissitiflora.* The mixture of exocarpic acid and octadec-9,11-diynoic acid exhibited the highest larvicidal activity. In view of the activity shown by the isolated compounds, it was concluded that *O.dissitiflora* bark contains compounds that may be used as larvicidal agents against the *A. arabiensis* mosquitoes.

WHAT DOES THIS MEAN?

Extracts from South African plant species can be used to create larvicides that are effective and safe.

There is a need for further studies under field conditions to evaluate the larvicidal activity of the above compounds. Also required are studies to evaluate the toxicity effects of these compounds to non-target organisms

STUDY

Elimination in the Face of Non-Sustainability

PRINCIPAL INVESTIGATOR

Rajendra Maharaj

PURPOSE OF THE STUDY

To determine the impact of the termination of the Lubombo Spatial Development Initiative (LSDI) on the malaria elimination efforts in Swaziland and South Africa

FINDINGS

The LSDI had a marked impact on malaria transmission in the three participating countries of Mozambique, South Africa and Swaziland, reducing the incidence of malaria. Impact was measured by the change in malaria incidence in South Africa and Swaziland, and the change in malaria prevalence in Mozambique. Reduction in incidence in South Africa and Swaziland was 9% and 98% respectively, whilst prevalence in Maputo province decreased to <5%.

After 10 years of implementing the LSDI programme, the programme was terminated. The measures implemented by the SAMRC could not be sustained by the Ministry of Health in Mozambique and as a result ,the gains made in terms of reducing the disease burden were reversed. Malaria increased three fold in the first two years after the LSDI disbanded. As a result of migration from Mozambique into South Africa and Swaziland the number of imported cases began to increase. Although South Africa and Swaziland still meet the WHO criteria for elimination, surveillance systems need to be strengthened in these two countries and malaria control needs to be sustained in southern Mozambique.

The collapse of malaria control in adjacent countries will have an impact on all countries in the region. A spin-off of the LSDI is the new initiative, MoSaSwa, modelled on the LSDI programme that was implemented in southern Mozambique. Cross-border initiatives are required in order to maintain a regional reduction in malaria cases. Only through the implementation of sustainable interventions, can elimination be achieved.

WHAT DOES THIS MEAN?

Impact

- Cross-border initiatives, implemented in a sustainable manner through adequate, long-term funding is necessary to achieve a regional impact and ultimately elimination.

Key recommendations from the study

- Malaria control should be a regional effort.
- Eliminating malaria requires political commitment and adequate funding.
- An elimination agenda should be built on the backbone of relevant, priority research.

PROGRAMME 4: HEALTH SYSTEMS STRENGTHENING

PURPOSE OF THE PROGRAMME

To contribute to health systems strengthening by undertaking systematic reviews, health policy and health systems research to provide evidence for policy-makers, 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

- Burden of Disease Research Unit
- Biostatistics Research Unit
- South African Cochrane Centre
- Health Systems Research Unit
- Health Policy Research Unit
- HIV-TB Pathogenesis and Treatment Research Unit
- Health Services to Systems Research Unit

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 biostatistical support training projects to assist SAMRC researchers and postgraduate students within the SAMRC

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: BURDEN OF DISEASE RESEARCH UNIT

NAME OF UNIT DIRECTOR: DEBBIE BRADSHAW

UNIT INFORMATION

The mission of the Unit is to assess and monitor the country's health status and determinants of disease; to project the future burden of disease in order to provide planning information to improve the health of the nation and to evaluate health information systems. Multidisciplinary approaches are used, drawing on epidemiology, demography and biostatistics. Expertise has been developed in the area of summary health measures, health surveys, the analysis of mortality data and health informatics. Inequalities are of particular importance given the legacy of the Apartheid history in South Africa and the current macro-economic trends arising from globalisation.

WHY IS THE UNIT'S RESEARCH IMPORTANT?

Burden of disease information and surveillance data are essential for planning and monitoring progress. Estimates from the Unit are used widely in policy making at national and provincial level. Studies conducted by BODRU have helped to track progress in reducing maternal and child mortality. They have identified the recent stagnation in progress with reducing child mortality, and increases in mortality from diabetes, renal disease, prostate cancer and breast cancer. An investigation is underway to estimate the contribution of modifiable risk factors to the burden of disease experienced by the population so as to help to guide health promotion and disease prevention efforts.

BODRU supports the only South African population-based cancer registry, which has been in existence for more than 20 years. The overall aim of the registry is to continuously identify and register all incident cancer cases who reside in eight selected magisterial districts in the former Transkei region of the Eastern Cape Province. A reliable database is generated and maintained to provide information about incidence of the different types of cancers and trends over time in a rural setting of South Africa and contributes to pooled studies of cancer epidemiology that include staging and cancer survival studies. Furthermore, data from the register is used periodically to contribute to the Africa chapter in *Cancer Incidence in Five Continents (CI5)* published by the WHO International Agency for Research on Cancer (IARC).

The unit has initiated a programme of research to evaluate routine health information systems. Data quality concerns have been identified in the routinely collected data that should be available to monitor prevention of mother-to-child transmission of HIV (PMTCT) and the immunisation programmes. Further work will be done to assess the availability and quality of clinical data collected in public sector hospitals. Such data will be essential to support the planned National Health Insurance System.

MAJOR COLLABORATORS/FUNDERS/PARTNERS

- Locally: National, provincial and local Departments of Health, Statistics South Africa, Department of Home Affairs, South African Universities, Eastern Cape hospitals.
- Regionally: WHO-AFRO, African Cancer Registry Network (AFCRN), Chronic Disease Initiative for Africa (CDIA).
- Internationally: World Health Organisation (WHO), Centers for Disease Control and Prevention (CDC), United States Agency for International Development (USAID), Institute for Health Metrics Evaluation (IHME), WHO Family of International Classifications Collaborating Centres, Queensland University of Technology, Australian National University.

STUDY

Second National Burden of Disease Study: Cause-of-Death Profile for South Africa

PRINCIPAL INVESTIGATOR

Debbie Bradshaw

PURPOSE OF THE STUDY

The 2nd National Burden of Disease (SA NBD) Study has confronted the data challenges that we face and the SA NBD team have derived best estimates of the number of deaths experienced in each of the provinces and nationally for the period 1997–2010. Furthermore, a detailed investigation was performed of trends in non-communicable disease for the study period.

FINDINGS

The 2nd SA NBD study reports South Africa's successes in population health and these include reducing mortality from HIV/AIDS, and overall child mortality and injuries. However, our data also highlight that high mortality is still continuing across our country, with a considerable burden attributed to non-communicable diseases and a concerning rise in mortality from diabetes, renal disease, prostate cancer and breast cancer. Even though injuries mortality rates have declined, levels of homicide still remain unacceptably high compared to the global average. The study points to the fact that considerable efforts are needed to meet our health-related Sustainable Development Goals (SGDs), and that these goals are likely to remain an unfinished agenda beyond 2015.

If we are to meet the Alma-Ata call of "health for all" and realise the preamble of the Constitution of South Africa to "improve the quality of life of all citizens", we need to reduce these health inequities and reduce mortality further. This will only be achieved by addressing social factors in addition to strengthening the health-care system. This study has reported estimates for each province and should assist health planners and other sectors in identifying priorities.

WHAT DOES THIS MEAN?

HIV/AIDS remains the leading cause of death, and efforts to provide access to treatment must be sustained and prevention efforts must be strengthened. A sizable proportion of HIV/AIDS deaths were associated with TB. Efforts to strengthen and integrate the TB programme must be addressed.

There is a considerable burden from non-communicable diseases and concerning signs of an increase in diabetes, renal disease, and prostate and breast cancer mortality. Efforts targeting prevention and management of non-communicable diseases and their risk factors need to be scaled up.

Mortality from other infectious conditions, in particular lower respiratory infections, diarrhoea and septicaemia, still prevail despite such deaths being preventable and/or treatable. Improving living conditions and providing access to quality health care are both needed.

Interpersonal violence and road injuries are major contributors to the loss of life due to premature mortality, and require the development and implementation of multi-sectoral prevention strategies.

Infant and under-five mortality have declined largely due to a reduction in mortality from HIV/AIDS. To ensure progress on the SDGs, a more focused approach is needed to tackle deaths from neonatal conditions, diarrhoea and lower respiratory infections, while prevention of mother-to-child transmission programmes should be strengthened towards the goal of eliminating paediatric HIV.

STUDY Rapid Mortality Surveillance	
PRINCIPAL INVESTIGATOR Debbie Bradshaw	
PURPOSE OF THE PROGRAMME/STUDY To monitor trends in key mortality indicators levels using the age and sex details of the deaths on the National Population Register	
FINDINGS	The fourth report based on the rapid surveillance system that tracks the number of deaths on the National Population Register was released in 2015. Empirically based estimates show a substantial decrease in mortality with an increase in average life expectancy of 9 years since the low of 54 years in 2005, reaching 62.9 years in 2014. Maternal mortality appears to have started to decline in 2010, but earlier reductions in under-five mortality have stagnated in the past 4 years.
WHAT DOES THIS MEAN?	Following national efforts to strengthen birth and death registration, it has been possible to set up a rapid mortality surveillance system to monitor key mortality indicators by adjusting for bias in the data. The results indicate that although gains have been made through the extensive roll-out of anti-retroviral treatment, concerted efforts in the health sector, as well as improved living conditions, will be needed to achieve the MDG goals for maternal and child health.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: BIOSTATISTICS UNIT

NAME OF UNIT DIRECTOR: CARL LOMBARD

UNIT INFORMATION

The Unit has three sections reporting on activities for 2015.

BIOSTATISTICS

STEPPED-WEDGE DESIGN IN HEALTH SYSTEMS RESEARCH

The evaluation of health systems interventions has, for a long time, faced the implementation challenge of not providing the intervention to half of the study sites (clusters) eligible for the study. In individual randomised trials, crossover designs ensure that all participants have exposure to the new treatment. With the difficulty of doing a full cross over trial in health systems intervention studies a limited cross-over design called the stepped-wedge design was developed. In this design, the study sites cross over from the standard-of–care setting to the intervention setting in a predetermined number of waves. The study sites are randomly assigned to a particular wave. Stepped-wedge designs have received a lot of renewed research interest over the past two years, and tools for study design and sample size determination have been developed (Hemming 2016). The statisticians of the Biostatistics Unit have been using and applying the stepped-wedge design tools in grant proposals and analysing data from studies with this design. In a collaborative study published in Plos One in 2015 (Naidoo 2015), the impact of introducing the Xpert MTB/Rif based diagnostic algorithm in presumptive tuberculosis patients was evaluated using a stepped-wedge design with 60 primary health-care clinics in four waves (Table 1). Contrary to expectations, the introduction of an Xpert1, based algorithm did not produce the expected increase in TB diagnostic yield.

TABLE 1. A non-randomised stepped-wedge evaluation of TB yield in five PHC groups as they transitioned from the smear/culture to the Xpert1 based algorithms in Cape Town. This table shows the TB diagnostic algorithm in place in five groups of PHC sites over the seven time-points (T1 to T7) used in the analysis. All sites initially had a smear/culture-based algorithm in place. The Xpert-based algorithm was introduced in August 2011 in Group A, in October 2011 in Group B, in February 2012 in Group C, in October 2012 in Group D and in February 2013 in Group E. With the exception of one PHC site, the groups represent all the sites within a sub-district. Abbreviations: TB—tuberculosis, PHC—primary health care.

Facilities	Nov 2010 (T1)	May 2011 (T2)	Nov 2011 (T3)	May 2012 (T4)	Nov 2012 (T5)	May 2013 (T6)	Nov 2013 (T7)
Group A (12 PHC sites)	Smear/Culture	Smear/Culture	Xpert	Xpert	Xpert	Xpert	Xpert
Group B (9 PHC sites)	Smear/Culture	Smear/Culture	Xpert	Xpert	Xpert	Xpert	Xpert
Group C (16 PHC sites)	Smear/Culture	Smear/Culture	Smear/Culture	Xpert	Xpert	Xpert	Xpert
Group D (9 PHC sites)	Smear/Culture	Smear/Culture	Smear/Culture	Smear/Culture	Xpert	Xpert	Xpert
Group E (14 PHC sites)	Smear/Culture	Smear/Culture	Smear/Culture	Smear/Culture	Smear/Culture	Xpert	Xpert

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COLLABORATION WITH THE SOUTH AFRICAN INTERNATIONAL OLYMPIC COMMITTEE (IOC) RESEARCH CENTRE

In 2015, the well-established collaboration, running since 2011, between this IOC research centre based at the University of Pretoria (Director: Prof. Schwellnus) and the Biostatistics Unit was renewed. Over the next four years, this collaboration will be researching, developing and implementing effective preventive and treatment methods for sports-related injuries and illnesses. Current research activities included injury and morbidity analysis in participants in the Two Oceans marathon races, Super Rugby tournament, Paralympic Games, and the evaluation of a 12-week patient-centred lifestyle intervention (U-Turn) for a chronic disease project. Apart from scientific publications in journals, crucial feedback to the organising bodies and medical teams supporting these events have resulted in changes to the participant rules of some of the sports as preventative measures and improvements in the management of illness and injuries in athletes taking part in these events. Current research projects are ongoing, and new projects are being developed, including those relating to other endurance events (e.g. Cape Town Cycle Tour) and football in SA.

HEALTH GIS CENTRE

The Health GIS Centre provides mapping and spatial analysis support to public health research, systems and intervention programmes in the southern African region.

During 2015, the Health GIS Centre continued to coordinate the mapping and spatial analysis of malaria in South Africa, producing an update of the national distribution and risk maps. Support of malaria surveillance in the country also continued, with emphasis on the classification and mapping of foci of malaria transmission in endemic districts in which intervention might be better targeted to accelerate the elimination of local transmission. The GIS Centre provided support to the national Department of Health: Malaria Directorate in two regional initiatives, namely the Elimination Eight malaria initiative (South Africa, Swaziland, Mozambique, Botswana, Zimbabwe, Namibia, Zambia and Angola) and the Mosaswa tri-country collaboration (South Africa, Swaziland and Mozambique), both of which have successfully secured funding from the Global Fund for AIDS, TB and Malaria (GFATM) during 2015 to further the regional malaria elimination campaign.

Collaborative research that the Health GIS Centre engaged in during 2015 included spatial analysis of XDR TB in KwaZulu-Natal in association with Emory University and cluster detection of paediatric TB in the eThekwini District in partnership with the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH), preliminary results of which were presented at the 46th Union World Conference on Lung Health, and the Conference on Retroviruses and Opportunistic Infections (CROI) 2015 respectively. Further collaborative research with the London School of Topical Medicine and the National Institute of Communicable Diseases (NICD) involved a cluster randomised trial comparing targeted versus generalised malaria vector control in South Africa, with the GIS Centre's contributions including delineation of study clusters, geographic sampling at the household level for baseline and ongoing comparison surveys, and mapping of progress and output indicators.

Staff of the GIS Centre produced a higher degree cum laude in 2015 investigating the spatial temporal modelling of malaria transmission using artificial neural networks, and participated in a study tour to Nagasaki University with focus on the development of climate-based malaria early warning systems. GIS Centre staff also attended and made contribution to a regional meeting of the World Health Organization (WHO) in Kigali addressing surveillance, monitoring and evaluation priorities for low transmission national malaria programmes in Africa.

SOUTH AFRICAN FOOD DATA SYSTEM (SAFOODS)

In 2015, the SAFOODS team had a number of exciting activities. SAFOODS joined the European Food Information Resource Network (EuroFIR) as the first African member in food compilation and established an Online Statistical Nutrition Analysis Request register on their website.

Other 2015 activities included updating and increasing our Baby Foods group from 70 to 283 food items, creating partnerships with food industry for the provision of food composition data analysed by their laboratories, presenting at the HSRC as invited speaker on food composition activities, becoming an official member of the Food Legislation Advisory Group of the National Department of Health, hosting a three-day Symposium on Food composition and dietary intake assessment and analysis in Cape Town, and delivering oral and poster presentations at the 11th International Food Data Conference in Hyderabad India.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: COCHRANE SOUTH AFRICA

NAME OF UNIT DIRECTOR: JIMMY VOLMINK

UNIT INFORMATION

Cochrane South Africa conducts research, including Cochrane systematic reviews, for enhancing evidence informed policy and practice for South Africa, the African region and internationally. Current research focus areas include nutrition and food systems, infectious diseases, immunisation, and clinical guideline development and implementation in South African primary care.

WHY IS THE UNIT'S RESEARCH IMPORTANT?

Knowledge translation is a tool for ensuring that research evidence informs policy and practice. Cochrane South Africa's work and research focuses on the various steps in knowledge translation, be it building relationships with stakeholders to ensure relevance of our research, conducting systematic reviews for policy or guidelines, building capacity to conduct reviews and use evidence, or evaluating methodology for improving knowledge translation or communicating results of research. Systematic reviews identify and evaluate all available research on a specific health-care topic and synthesise their results to inform policy decisions. A well-conducted Cochrane Review provides the most authoritative evidence on the efficacy of preventive, therapeutic and rehabilitative interventions, and is a powerful tool to enhance health-care knowledge and decision making. We aim to develop our research agenda in collaboration with policy makers, health service providers and the public, to ensure our work is relevant and that the research evidence can be used to inform health-care decisions.

MAJOR COLLABORATORS/FUNDERS/PARTNERS

Partners and collaborators include:

- Cochrane African Network, including collaborators from Nigeria, Cameroon, Kenya, Malawi, the Gambia, Mozambique, Uganda, Ethiopia
- Centre for Evidence-based Healthcare, Stellenbosch University
- National Department of Health, South African Clinical Trials Registry

Funders include:

- DFiD, through the Effective Health Care Research Consortium, Liverpool School of Tropical Medicine
- World Health Organization
- SAMRC (Flagship funding)
- Cochrane Collaboration

STUDY

South African Guidelines Excellence Project – A Flagship Project Funded by the South African Medical Research Council (SAMRC).

PRINCIPAL INVESTIGATOR

Taryn Young

PURPOSE OF THE STUDY

The Alliance for Health Policy and Systems Research, WHO, in an attempt to enhance evidence informed decision making by engaging policymakers in collaborative approaches to generate and use knowledge, funded two projects – one in Mexico and one implemented in South Africa and Cameroon. This article provides a reflection on the implementation and impact of these two projects.

FINDINGS

In a specific tailored strategy, the Policy BUDDIES, drew on partners' experience in working in knowledge translation. The project was conducted in South Africa and Cameroon. By strengthening relationships, engagement and networks, we linked sub-national policymakers and researchers in order to enhance their interaction and dialogue, create opportunities to learn more about each other's worlds and identify areas of work related to evidence-informed decision making. The project informed a policy framework for medication adherence for chronic diseases, including both HIV and non-communicable diseases. Policymakers engaged in the buddying process reported an enhanced recognition of the value of research,and greater demand for policy-relevant knowledge.

WHAT DOES THIS MEAN?

Key lessons learned from Policy BUDDIES implementation:

- Relationships open the door to mutual respect and learning.
- Researcher buddies benefited in learning about the policymaking world.
- Individual champions must be located in a network.
- Evidence plays an objective and neutralising role beside powerful experts.
- Organisational-level systems and processes could be improved to support evidence-informed health policy.
- Progress cannot be sustained without dedicated time and resources.

STUDY

Incentives and enablers to improve adherence in tuberculosis

PRINCIPAL INVESTIGATOR

Elizabeth Lutge

PURPOSE OF THE STUDY

This study aimed to evaluate the effects of material incentives and enablers in patients undergoing diagnostic testing, or receiving prophylactic or curative therapy, for tuberculosis.

FINDINGS

The findings show that incentive programmes have little or no effects in improving long-term adherence to treatment for active tuberculosis. However, single once-only incentives improve once-off clinic re-attendance for initiation or continuation of tuberculosis prophylaxis. In evaluations between different types of incentives, cash incentives appear to be more effective than non-cash incentives; but there was no difference between giving immediate cash incentives and delaying incentives until completion of prophylaxis.

WHAT DOES THIS MEAN?

Incentives targeted at recipients of care may have some positive effects on adherence in the short term, but there is currently insufficient evidence to know if they can improve the long-term adherence to tuberculosis therapy.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: HEALTH SYSTEMS RESEARCH UNIT

NAME OF UNIT DIRECTOR: CATHY MATHEWS

UNIT INFORMATION

The main purpose of the Unit is to conduct health systems research in order to develop health systems; improve the organisation, efficiency, effectiveness of health systems; and increase the impact of health systems on population health and well-being. Health systems research attempts to understand and evaluate how health systems function, and how they can be strengthened, including how to develop and implement policies and programmes in ways that strengthen, rather than undermine, health systems.

WHY IS THE UNIT'S RESEARCH IMPORTANT?

We conduct health policy, systems and service research utilising mixed methods to inform policy and to improve the equity, effectiveness and efficiency of service delivery. Our Unit focuses on strengthening community-based, school-based and health facility-based platforms, to promote health, and to prevent and treat disease. For this purpose, we conduct in-depth, systems-related work in the following areas:

- Maternal, child and adolescent health
- Sexual and reproductive health and mental health
- Chronic infectious diseases, such as TB/DR TB and HIV/AIDS, and non-infectious diseases, such as diabetes
- Social policy, nutrition and health

WHO ARE YOUR MAJOR COLLABORATORS/FUNDERS/PARTNERS?

- Regional: UCT and UWC
- Local: SAMRC, Stellenbosch University and NRF, UKZN, K-Rith, WITS and other HEIs, NHLS
- International: BMGF and NIH, institutions in at least eight different African countries, a number of European countries, Canada, USA, Ireland and UK.

STUDY

Improving Treatment Adherence for Blood Pressure Lowering via Mobile Phone SMS-Messages in South Africa: a Qualitative Evaluation of the SMS-Text Adherence SuppoRt (StAR) Trial.

PRINCIPAL INVESTIGATOR

Natalie Leon

PURPOSE OF THE PROGRAMME/STUDY

Innovative interventions, such as short messaging system (SMS)-text messages sent to mobile phones, may improve adherence to chronic disease treatment, but little is known of its effectiveness in operational settings, especially in LMICs. A pragmatic StAR trial, in Cape Town, South Africa, tested a newly developed, low-cost, mobile phone based system to provide medication collection reminders and targeted health messages by SMS-text, to improve adherence behaviour and blood pressure in primary care patients. We report on a qualitative evaluation that explored the trial participants' experiences and responses to the SMS-text messages, and the barriers and facilitators to delivering adherence support via patients' own mobile phones, in order to understand the implications for future provision of mobile-phone support for chronic care services within a resource-limited setting.

FINDINGS

Participants felt the SMS-text messages were acceptable and useful for reinforcing existing patient reminders systems and for helping to develop more robust systems. Several credited the intervention with improving their attitude to their illness and their adherence behaviour, and could demonstrate how the timing and content of the SMS-text messages contributed to a positive and lasting change in mindset and behaviour. They particularly valued the SMS-reminders to collect medicine, notification of missed appointments and being able to change an appointment via SMS. The personalised and polite tone of SMS messages (using patient's name, signed by named providers, birthday messages), together with the supportive delivery by trial staff, contributed to a sense of affirmation and partnership, in strong contrast to their negative perceptions of usual care. Findings also highlighted a complex set of psycho-social and health service factors that negatively influence patient adherence.

WHAT DOES THIS MEAN?

- Adherence support for treatment of raised blood pressure, delivered via SMS-text message on the patient's own phone, was found to be acceptable, relevant and helpful, even for those who already had their own reminder systems in place.
- Our findings begin to identify for whom and what core elements of the SMS-text message intervention appear to work best in a low-resource operational setting, issues that future research should explore in greater depth.
- Continued research is required to refine the target population who would best benefit from SMS-based adherence support as well as the mechanisms by which such interventions could be integrated with mainstream operations, clinical communication and information systems.

STUDY

Progress Towards Child Survival Goals in Six African Countries: The Role of Community-Based Delivery Platforms

PRINCIPAL INVESTIGATOR

Tanya Doherty

PURPOSE OF THE STUDY

To review scale-up of integrated community case management of childhood illnesses in Ethiopia, Mali, Malawi, Niger, Ghana and Mozambique, and to explore its contribution to the achievement of child survival goals

FINDINGS

All of the countries achieved declines in under-five mortality with three (Niger, Malawi and Ethiopia) reaching the MDG4 target. Whilst community-case management of childhood illnesses was scaled-up across the countries, programmes differed in key characteristics including whether community health workers (CHWs) were paid or volunteers and whether they did active or passive (from a health post) case-finding. Supervision was found to be weak across countries, especially clinical supervision, and stock outs of essential drugs were problematic.

Less attention was paid to the demand-side, especially community mobilisation which, was reflected in low utilisation of CHWs especially in Ghana and Ethiopia.

WHAT DOES THIS MEAN?

This is the first multi-country assessment of integrated community case management and its findings are important for informing scale-up of this approach in other settings, and identifying areas of weakness and threats to sustainability. The reasons why some countries have achieved child survival goals while others have not is poorly understood. The detailed country-specific analyses of progress in under-five mortality in Malawi and Niger can be used to inform similar undertakings in other countries. The study has important lessons for South Africa, which is in the process of establishing ward-based outreach teams consisting of CHWs and a primary focus of these CHWs, is maternal and child health.

PROGRAMME 5: PUBLIC HEALTH INNOVATION

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

- Drug Discovery and Development Research Unit
- Primate Unit and Delft Animal Centre
- Medical Imaging Research Unit
- The Biomedical Research and Innovation Platform
- Herbal Drugs Research Unit

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 strengthen 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

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: BIOMEDICAL RESEARCH AND INNOVATION PLATFORM

NAME OF UNIT DIRECTOR: JOHAN LOUW

UNIT INFORMATION

The Platform is a leader in the development of early diagnostics and research into the discovery of new therapeutic entities for diabetes, diabetic cardiomyopathy and obesity within the South African context.

WHY IS THE UNIT'S RESEARCH IMPORTANT?

The World Health Organization (WHO) estimates that the burden of chronic non-communicable disease (NCD) in South Africa is two to three times higher than in other developing countries. Non-communicable diseases are on the increase in both rural and urban communities of South Africa, and across the ethnic diversity of the country. In South Africa, NCDs account for an estimated 37% mortality and 16% of disability-adjusted life years. Diabetes mellitus, ischaemic heart disease, stroke and hypertension account for most NCD related deaths in South-Africa. Currently, there is a lack of country-relevant scientific evidence to establish effective disease prevention programmes and treatment strategies to address the ever increasing burden of NCDs in South Africa.

The Biomedical Research and Innovation Platform has state-of-the-art-laboratories to facilitate high-quality basic research using cell and animal disease models, and has the expertise and experience to innovate new early diagnostics and therapeutics within the South African context.

MAJOR COLLABORATORS/FUNDERS/PARTNERS

Agricultural Research Council (ARC), Council for Scientific and Industrial Research (CSIR) and Universities (UCT, Stellenbosch, Pretoria, NMMU, UWC, Zululand, WSU, Limpopo, Fort Hare, Venda, NWU, CPUT and the Sefako Makgatho Health Sciences University, University of Southern Denmark (Odense, Denmark), Vrije Universiteit Brussels (Belgium), Helmholtz Institute (Munich, Germany), Polytechnic University of Marche (Ancona, Italy), Tokyo University of Agriculture and Technology (Japan), National Health Research Institutes (Miaoli county, Taiwan) and National Tsing Hua University (Hsinchu, Taiwan)

STUDY
Early Detection of Diabetes

PRINCIPAL INVESTIGATOR
Johan Louw

PURPOSE OF THE STUDY
To identify early diabetic markers as a screening tool

FINDINGS

- Diabetes is a common disease that is associated with significant morbidity and mortality. The disease has a latent, asymptomatic phase that may be present for up to seven years before clinical diagnosis. Early detection and treatment during the asymptomatic phase can prevent or delay the onset of overt diabetes.
- We demonstrated that protein markers are differentially expressed in plasma of humans who differ according to their diabetic status. This suggests that these proteins play a role in the pathogenesis of type 2 diabetes mellitus (T2DM) in our population. Such proteins or genes could be incorporated into predictive algorithms to identify individuals with an increased risk of developing of T2DM.
- Protein expression in urine enables a non-invasive assessment of disease risk. Using Western blot analysis, we showed that urinary protein expression correlated with T2DM disease progression in humans, i.e. the expression of certain proteins progressively increased from pre-diabetes to diabetes.

WHAT DOES THIS MEAN?

We have identified a unique set of protein markers in the urine of individuals at risk of developing T2DM, which can be used as a screening tool to detect asymptomatic individuals before clinical signs of T2DM can be detected. The early detection of T2DM facilitates lifestyle and therapeutic interventions, which may prevent or delay the onset of the disease.

STUDY
Aspalathin and PPAG as potential drug candidates

PRINCIPAL INVESTIGATOR
Johan Louw

PURPOSE OF THE STUDY

Diabetes is potentially the greatest challenge faced by many of the world's health care systems, particularly those of the developing world, including South Africa. Currently there is no cure for diabetes and available oral therapies generally fail to prevent the progression of type 2 diabetes mellitus (T2DM) towards insulin dependence, and related comorbidities such as cardiovascular disease, blindness, amputations and advance kidney disease. The need for safer and more effective drugs to treat T2DM is a health priority. The Biomedical Research and Innovation Platform isolated and synthesised two bioactive compounds, aspalathin and PPAG (Z-2-([3-D-glucopyranosyloxy)-3-phenylpropenoic acid), that have demonstrated significant in vitro and in vivo anti-diabetic activity.

FINDINGS

- We have published several papers on the beneficial health effects of aspalathin. Aspalathin demonstrates ameliorative affects against dyslipidaemia, insulin resistance, pancreatic beta cell dysfunction and cardiac stress.
- We have also published papers demonstrating the anti-diabetic potential of PPAG. Currently the compound is under consideration by a pharmaceutical company as a novel class of anti-diabetic drug.

WHAT DOES THIS MEAN?

These two compounds have the potential to ameliorate diabetes and the comorbidities associated with the disease progression.

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: PRIMATE UNIT & DELFT ANIMAL CENTRE (PUDAC)

NAME OF UNIT DIRECTOR: CHESA GIFT CHAUKE

UNIT INFORMATION

PUDAC is not a research unit but a platform to conduct pre-clinical research and testing. It is a research support facility and the only one of its kind in South Africa, and, in some respects, Africa. The platform provides the infrastructure and capacity to maintain and utilise animal models, animal management services, and research (collaborative and contract) for biomedical research and development.

In-house capacity has been developed in molecular genetics and reproduction in order to characterize the biology and therefore applicability of our animal models.

WHY IS THE UNIT'S RESEARCH IMPORTANT?

PUDAC's research is important because this platform provides professional support, well-kept animal models and research support to national and international researchers, as well as assists scientists to achieve their research objectives.

The platform also contributes to biomedical research in the following ways: the generation of new, in-house research to define and validate animal models; the maintenance of colonies of captive-bred nonhuman primates (NHP), horses and rodents (animal models, services, infrastructure and expertise); laboratory animal science and technology professionals; provision of skilled laboratory scientific and technological support; as well as the provision of health research infrastructure.

MAJOR COLLABORATORS/ FUNDERS/ PARTNERS

- Locally: Academic institutions, internal collaborators, pathology laboratories
- Internationally: Pharmaceutical Industry

STUDY

International Contract Research - Sub Chronic Toxicity and Efficacy of Vitamin K7 (GN50R) in Vervet Monkeys

PRINCIPAL INVESTIGATOR

Chesa Chauke

PURPOSE OF THE PROGRAMME/STUDY

- Evaluate the toxicity and bioavailability of a chemically modified form of natural vitamin K7 (GN50R) compared to a standard vitamin K7 formulation; carboxylation, in particular osteocalcin
- MK7 levels will be validated by quantifying them not only in terms of micrograms of molecule in plasma, but also in relation to its dose-dependent ability to promote protein

FINDINGS

- Modified MK7, GN50R is nontoxic up to a concentration 1 000x, which is the recommended dietary adequate intake (90 µg/d) of vitamin K for women age 19 to >70 y.
- After chronic intake, modified MK7, GN50R is more bioavailable than standard MK7.
- Modified MK7, GN50R, is able to promote activation of vitamin K-dependent proteins to a higher extent compared to standard MK7.

WHAT DOES THIS MEAN?

The proposed research will enable future human studies and potentially the use of this modified form of MK7 in humans where it could potentially show enhanced benefits in terms of bioavailability and hence potential efficacy in promoting bone health over standard MK7 formulations.

Since this is a contract research project, PUDAC enabled the research through the provision of the animal models and the technical support. Procedures on animals were performed and supervised by skilled, experienced and SAVC registered staff.

STUDY

Gonadotropin-Releasing-Hormone I & II Receptor Expression in Human and Non-Human Primate Sperm

PRINCIPAL INVESTIGATOR

Charon de Villiers

PURPOSE OF THE PROGRAMME/STUDY

Gonadotropin-releasing hormone receptors (GnRH-I and GnRH-II) are expressed in the mammalian reproductive tract. Of the two isoforms in human sperm, GnRHR-II is the only receptor known to be transcriptional, though non-functional. However, in non-human primate sperm, the presence and functionality of both GnRH I & II is unknown. The purpose of this study was, therefore, to evaluate whether these two GnRH receptors are expressed in non-human primate sperm.

FINDINGS

- Sequence analysis showed the presence of both GnRH (I & II) receptors in non-human primate sperm.
- The expression of GnRHR-I was also confirmed by real-time PCR, however GnRHR-II was not included in the expression analysis since it is non-functional.

WHAT DOES THIS MEAN?

The findings of this study are the first to reveal GnRH receptors on non-human primate spermatozoa. Both receptors were identified in sperm, but the results only indicated expression for the GnRH type I receptor. The prominent expression of GnRHR-I in sperm correspond with reports on the function of the receptor to be site specific.

PROGRAMME 6: BIOMEDICAL RESEARCH

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

- Inter-University Cape Heart Research Unit
- Receptor Biology Research Unit
- Human Genetics Research Unit
- Bioinformatics Capacity Development Research Unit
- Immunology of Infectious Diseases Research Unit
- Stem Cell Research and Therapy Unit
- Antiviral Gene Therapy Research Unit

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

SELECTED RESEARCH HIGHLIGHTS FROM PROGRAMME UNITS

UNIT NAME: GRANTS INNOVATION AND PRODUCT DEVELOPMENT (GIPD)

NAME OF UNIT DIRECTOR: RICHARD GORDON

Grants, Innovation and Product Development (GIPD) is a newly established unit that oversees all of the external grant funding and innovation activities of the SAMRC. These activities are managed through a number of business units, platforms and programmes in GIPD, including Strategic Health Innovation Partnerships (SHIP), the Biomedical Research and Innovation Platform (BRIP), PUDAC, the Grants Management Division, Strategic Research Initiatives (SRI) and the Technology Transfer Office (TTO).

In total, we manage approximately 200 grants ranging from small research grants to medium product development projects and large clinical studies. These include:

- the pioneering Flagship project programme
- product development projects to develop new vaccines, drugs (and drug formulations) and medical devices
- small research grants for new/young and mid-level to established investigators
- strategic partnerships projects with global funding partners.

WHY IS THE UNIT'S WORK IMPORTANT IN THE CONTEXT OF SOUTH AFRICA?

GIPD has several functions.

- It channels total funding in the region of R200 million per annum to basic, applied and clinical health research in the country
- It seeks to actively address the disease burden of South Africa by supporting and facilitating relevant applied research and product development activities.
- It coordinates the SAMRC's investments in health research and development with those of other major funders to maximise the impact thereof.
- It facilitates the implementation of research through intellectual property management and commercialisation functions.
- It develops and tests new intellectual property relating to the diagnosis and treatment of metabolic disorders, including diabetes.
- It provides services and expertise in preclinical research and development.

MAJOR COLLABORATORS/FUNDERS/PARTNERS

GIPD establishes and nurtures strategic partnerships with other funders and organisations. Current partnerships include:

- Department of Science and Technology, SA
- National Department of Health, SA
- The National Institutes of Health (NIH), US
- The Bill and Melinda Gates Foundation, US
- Medicines for Malaria Venture, Switzerland
- The UK Government and UK Medical Research Council, particularly through the Newton Fund
- Grand Challenges, Particularly Grand Challenges Africa, US
- Anglo American Platinum, SA
- The World Health Organisation and the CEWG Demonstration projects
- The Canadian Institutes of Health Research, Canada
- Drugs for Neglected Diseases Initiative and their Anti- Microbial Resistance program, Switzerland
- Forte – Swedish Research Council for Health, Welfare and Working Life, Sweden

LIST OF OTHER KEY PROJECTS CURRENTLY BEING FUNDED BY GIPD:

TB AND MALARIA DRUG DISCOVERY PROJECTS

The TB Drug Discovery project is the largest drug discovery project in Africa, and SHIP funding is primarily focused at leveraging South African expertise to lead the way in understanding the basic biology of drug resistance and drug susceptibility; knowledge which will then inform intelligent drug discovery. Some key developments arising from the programme include development of reporter systems that provide information about possible drug targets. These have been incorporated into the screening cascade, which is now not only used in South Africa, but has been adopted by the global TB Drug Alliance. Funding is also focused at identifying drugs that possess activity against drug-resistant TB, leveraging on the unique resources available in South Africa in this area.

The main goal of the Malaria Drug Discovery programme is to leverage local and global partnerships towards the discovery and development of new, effective and affordable antimalarial drugs to reduce the burden of malaria, and ultimately contribute to the eradication of the disease on the African continent and other disease endemic countries. SHIP funding in the past couple of years has been primarily focused on the development and characterisation of a back-up chemical series to outperform MMV390048, the compounds that is currently in clinical development. Of the three compounds initially selected, two are showing great promise and are on track to be selected as potential drug candidates. The second focus has been to leverage on South African mosquito vector expertise, and indeed the team has successfully demonstrated transmission of gametocytes from a blood meal to mosquitoes in the laboratory for the first time in South Africa. This is one of only a handful of facilities in the world to have this capability, and it will enable South Africa to contribute towards the development of antimalarial drugs that have the capability to block transmission to parasites from humans to the mosquito, and thus contribute towards malaria eradication. The team has also developed world-class capability for identifying compounds that have activity against the gametocyte stage of the parasite, which is one of the most desirable features for a new antimalarial drug.

At the same time, the SAMRC are funding a malaria and TB drug discovery project with North West University. This flagship project is seeking to develop drug combinations utilising complimentary physiochemical properties of molecules in a novel combination. By combining one compound with oxidative properties and another with reductive properties, it is believed that these novel combinations will provide approaches with novel mechanisms of action – particularly for TB.

THE CLINICAL GUIDELINES APP

In 2015, the SAMRC funded a project to digitise the essential drugs list in an App form to overcome the limitations with the paper-based programme. The project soon expanded to include the Primary Healthcare Guidelines with the goal of assisting health-care workers, doctors and students to access the latest guidelines and drugs list.

The App was launched at the National Department of Health in November 2015 and had more than 8 000 community health workers, doctors and nurses download the App in the first two months. GIPD funded several training workshops around the country.

Unique features:

- The App is easily updated. This therefore does not require the release of annual publications.
- The App works "off-line" and does not need to be connected to the world wide web to function.
- There is functionality to report adverse drug reactions and stock outs.
- Additional functionality records brand and generic names of formulation as well as costing and locations of nearest suppliers.

The App also provides the Department of Health with intelligence on what is being investigated, where and at what time of day. This enables the Department to conduct training workshops in areas where problems are identified.

In 2015, GIPD funded a proof-of-concept study to investigate the feasibility of producing broadly neutralising monoclonal antibodies to HIV (specifically CAP256-VRC26 antibodies) in plants. The study demonstrated good yields with antibody breadth being maintained. However, the potency was reduced when compared with antibodies produced in mammalian cells. A phase II study is being funded to optimise production and address the potency issue.

NOVEL FORMULATIONS OF DRUGS

Oxytocin for PPH

Oxytocin injection is the recommended medicine for preventing and treating postpartum hemorrhage (PPH). However, the injectable formulation of oxytocin requires special temperature storage conditions to remain effective. The cold chain storage required to transport and store oxytocin is unreliable in resource-constrained countries. In order to overcome these limitations a needle-free, heat-stable, dry-dosage form of oxytocin is being developed by PATH (USA) and SAMRC in the form of fast-dissolving tablets for sublingual (under-the-tongue) administration. Successful outcomes of this project could lead to a decrease in maternal death due to PPH as a result of increased use of a stable and easy-to-use form of oxytocin.

Low dose darunivir

The project involves the initial development step for a new, simpler, safer, more potent and potentially more cost-effective second-line antiretroviral therapy for South Africa.

First line failures in the HIV treatment are almost always due to adherence problems; current second line adherence is invariably even more difficult, due to a higher pill burden, twice daily dosing and greater toxicity. Provision of a better tolerated second-line, with a higher resistance barrier and simplified dosing, would be a major advance in the provision of antiretroviral care, for the accumulating patients on second line.

There is strong supportive evidence that darunavir, a protease inhibitor, can be dosed once daily, with a significantly better side-effect profile and greater resistance barrier compared to other protease inhibitors. The dose can also be halved from current levels. This will decrease the side effect profile further, as well as reduce the cost of darunavir, as dose of drug is a major cost-driver for generic manufacturers. South Africa would hugely benefit from improved second-line therapies, as it has the largest number of people on antiretrovirals in the world.

Paediatric levofloxacin

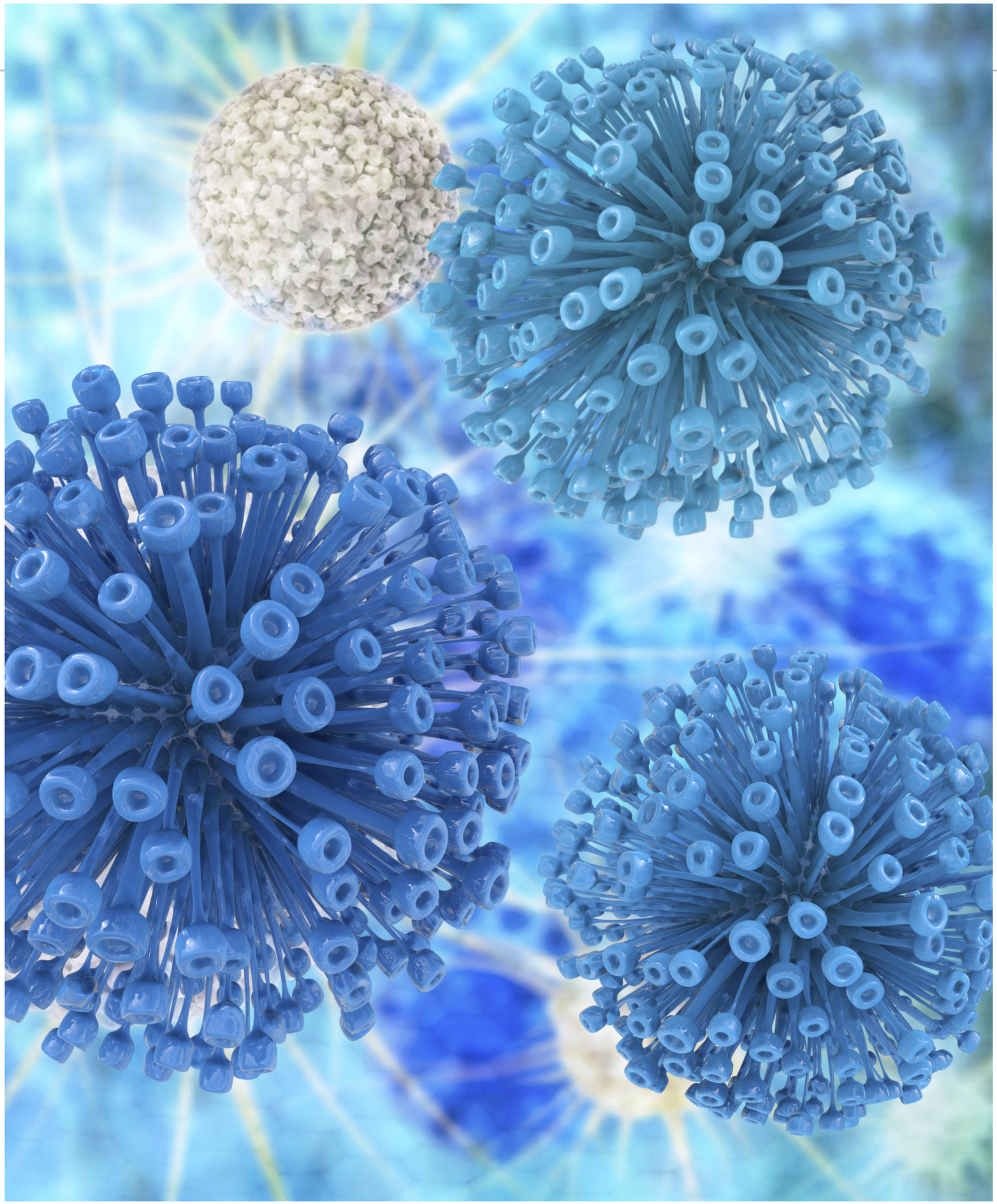
This is a phase III clinical trial on TB child and adolescent multi-drug resistant (MDR-TB) preventive therapy. A number of observational studies suggest that MDR-TB preventive therapy may be effective and safe, but a randomised trial is required to prove efficacy and impact on global policy and practice. TB in children is expensive to treat and frequently requires prolonged hospitalisation. Prevention of MDR-TB in children is therefore of paramount importance. The objective of this project is to assess the efficacy of preventive therapy in child and adolescent contacts of MDR-TB using a paediatric levofloxacin dispersible formulation. If successful, this trial would, for the first time, provide a high-quality evidence base for appropriate clinical management of child and adolescent MDR-TB contacts.

SMU novel TB regimen: The purpose of the research project is to find new regimens for multi-drug TB which accounts for 4 000 to 8 000 deaths per annum if one factors in the undiagnosed cases in the community (with up to 510 000 people world-wide in need of specialised treatment). The project aims to evaluate the impact of a new injection-free 6-month treatment against the conventional empiric injection-based regimen; the impact of ART on bedaquiline concentrations in HIV-infected patients in the interventional aim and the impact of the new treatment regimens on patient infectiousness compared to the conventional regimen using cough aerosol sampling and GPS/CO2-detection technology.

It is anticipated that with this new regimen, adherence will be better and adverse event rate will be lower. If expectations are realised, the results will likely effect a policy change, both locally and globally, with respect to how we treat patients with MDR-TB. It is also expected to significantly reduce the infectiousness of patients with MDR-TB

TB TRANSMISSION PROJECT

A multidisciplinary team has been established to systematically address bacterial, host and environmental factors contributing to TB transmission in a high-burdened target community. This well-characterised community will provide TB cases and a relevant study environment in which to investigate TB transmission. Hypotheses to be tested: 1) that phenotypic and genotypic characteristics of potentially transmitted organisms may differ from those organisms isolated by conventional sputum based techniques 2) that host immune (inflammatory) signatures may differ between high and low transmitters, and 3) that transmission is determined by the quantity of air exchanged from infective to susceptible individuals and the prevalence of potentially infective particles in that air. It is projected that by year 3, the defined networks of TB cases and the susceptible population will allow spatial analysis to enable a focus change from high-risk individuals to high-risk environments contributing to transmission. The transmission-risk mathematical modeling will be used to identify those parameters such as per-person ventilation levels to identify future environmental interventions.



STRATEGIC OBJECTIVES, PERFORMANCE INDICATORS, PLANNED TARGETS AND ACTUAL ACHIEVEMENTS

The significant over achievement in publications is due to the SAMRC now including all publications with an impact factor greater than five, whereas in the past only the publications in a few select journals were acknowledged

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	
Administer health research effectively and efficiently in South Africa	To ensure good governance, effective administration and compliance with government regulations	1,1	Compliance with legislative prescripts, reflected in audit findings relating to the processes and systems of the SAMRC	
		1,2	% of the 2015/16 government allocated SAMRC budget spent on administration	
Lead the generation of new knowledge, and facilitate its translation into policies and practices to improve health	To produce and disseminate new scientific findings and knowledge on health	2,1	Number of published journal articles, book chapters and books by South African Medical Research Council (SAMRC), MRC (Medical Research Council) and Medical Research Council of South Africa (MRCSA) researchers within intramural research units, extramural research units and collaborating centres at the SAMRC (malaria, TB, HIV and cancer) and self-initiated research , SHIP and the flagship projects	
		2,2	Number of published journal articles by SAMRC/MRC/MRCSA grant-holders during the reporting period, with an acknowledgement of SAMRC/MRC/MRCSA funding support during the reporting period	
	To promote scientific excellence and the reputation of South African health research	2,3	Number of published indexed high-impact factor journal articles with an SAMRC/MRC/MRCSA affiliated author during the reporting period	
	To provide leadership in the generation of new knowledge in health	2,4	Number of journal articles where the first author and/or the last author is affiliated to the SAMRC/MRC/MRCSA during the reporting period	
	To facilitate the translation of SAMRC research findings into health policies and practices	2,5	Number of new local/international policies and guidelines that reference SAMRC research during the reporting period	

	REPORTING PERIOD: 2015/16 PERFORMANCE TARGET	FREQUENCY	ACTUAL	VARIANCE
	Clean	Annual	Clean	
	25%	Annual	19%	
	450	Quarterly	680	The target set was too conservative. This indicator had to be rephrased for the 2015/16 FY to include books and book chapters. Because of the latter, the SAMRC did not have a baseline to guide the organisation. Corrective action: The SAMRC will, based on this performance, be in a better position to set more realistic performance targets as it will have a baseline to work from.
	115	Quarterly	101	The SAMRC is in a strong position to achieve the remaining quarterly targets following the implementation of an additional requirement whereby recipients of SAMRC funds are obligated to acknowledge the SAMRC in all publications or publicity materials emanating from, related to or based on SAMRC-funded project work. Corrective action: SAMRC continues to monitor to ensure that all recipients of SAMRC funding acknowledge the SAMRC in research output, especially publications.
	12	Quarterly	602	The significant over-achievement in publications is due to the SAMRC now including all publications with an impact factor greater than five, whereas in the past, only the publications in a few select journals were acknowledged. the SAMRC, in line with the Framework for Strategic Plans and Annual Performance plans can I not amend the targets at this point. Corrective action: The target was amended in the 2016/17 Annual Performance Plan.
	165	Quarterly	417	The target set was too conservative. This indicator had to be rephrased for the 2015/16 FY to include those publications with last authors affiliated to the SAMRC. Because of the latter, the SAMRC did not have a baseline to guide the organisation. Corrective action: The SAMRC will, based on this performance, be in a better position to set more realistic performance targets as it will have a baseline to work from.
	4	Bi-Annual	4	

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	
Lead the generation of new knowledge, and facilitate its translation into policies and practices to improve health	To provide funding for the conduct of health research	2,6	Number of research grants awarded by the SAMRC during the reporting period	
Support innovation and technology development to improve health	To provide funding for health research innovation and technology development	3,1	Number of innovation and technology projects funded by the SAMRC to develop new diagnostics, devices, vaccines and therapeutics during the reporting period	
Build capacity for the long-term sustainability of the country's health research	To enhance the long-term sustainability of health research in South Africa by providing funding for the next generation of health researchers	4,1	Number of SAMRC bursaries/scholarships/ fellowships provided for post-graduate study at masters, doctoral and post-doctoral levels during the reporting period	

	2014/15 PERFORMANCE	FREQUENCY	2013/14 ANNUAL PERFORMANCE PLAN TARGET	ANNUAL PERFORMANCE
	110	Annual	112	The organisation made more funding available for research grants than anticipated. Corrective action: The SAMRC will, going forward, set a more realistic target in line with available funding for new research projects.
	30	Annual	34	The target for this indicator was set too conservatively. Corrective action: The SAMRC will use the performance of this financial year to set a more realistic baseline.
	65	Annual	66	There were more bursaries, scholarships and fellowships provided for post-graduate study than anticipated. Corrective action: The SAMRC will, going forward, set a more realistic target in line with available funding for bursaries/scholarships/fellowships.

CORPORATE & MARKETING COMMUNICATION

MEDIA COMMUNICATION AND STAKEHOLDER ENGAGEMENTS

The South African Medical Research Council through its relationship with the media regularly informs the media of new research that is published. The following table lists the press releases issued in the reporting period.

MONTH	TOPIC/ISSUE
April 2015	• The SAMRC's new extramural units kick off new financial year • SAMRC – Scientific Merit Awards 2015 call for nominations • R8 million Dollars' worth of grants awarded to scientists at South African Universities • SAMRC establishes a R2 million fund to host distinguished scientific lectureships in South Africa • R90 million Newton fund – First call for proposal
May 2015	• Research funders unite to prepare for outbreaks • Scientific Merit Awards 2015 call for nominations extended • Correction and clarification statement – The saving babies report 2012–2013 • The SAMRC responds to the medical innovation bill
June 2015	• Announcement of the SAMRC research capacity development initiative for selected South African universities • Media are invited to a briefing by the South African Medical Research Council at the SA Aids Conference, where the Council will be presenting key findings and recommendations on improving patient care for MDR-TB patients and announcing new research funding ventures for South African medical scientists • R30 million for selected previously under-resourced South African universities • The South African Medical Research Council presents its latest findings on improving MDR-TB patient care and announces new research funding ventures at SA AIDS 2015
July 2015	• Refocussing malaria research from control to elimination in South Africa
August 2015	• SAMRC establishes Malaria Research Centres of Excellence by investing R3 million • Malaria research under the microscopel
September 2015	• Leading experts in violence prevention gather in South Africa to share innovative ideas about how to end gender violence • South African Medical Research Council plays crucial part in global polio eradication • SAMRC speaks at the 21st South African Psychology Congress
October 2015	• The SAMC reports yet another flawless audit to parliament • Heightened South African activity in HIV vaccine research • Bi-lateral agreement between Sweden and South Africa secures in excess of R30 million to advance health • Country's leading researchers recognised for remarkable efforts in medical research
November 2015	• Improved diagnostic tests may manage the spread of bovine tuberculosis in South Africa • The Development Origins of Health Disease Congress • CERQual: A new approach for supporting the use of qualitative evidence in decision making
December 2015	• Renowned SAMRC scientists honoured for their contribution to health research • R70 million injected into TB control and implementation research • Under-reporting of HIV-related deaths hindering the fight against AIDS
February 2016	• A rapid, accurate and cost-effective innovation to test HIV drug resistance • SAMRC calls for gender equality in South African homes • Monthly vaginal ring is safe and protects women from HIV–results from two large-scale trials among women in Africa
March 2016	• South African Medical Research Council Scientific Merit Awards 2016–Call for nominations

THE FOLLOWING STATISTICS REFLECT THE MEASURED MEDIA COVERAGE OF THE SAMRC FOR THE PERIOD 2015/16.

AVE VALUE GENERATED
over the financial period

R 37 915 611.00

POSTITIVE media coverage generated

236 media items measured

NEUTRAL media coverage generated

999 media items measured

NEGATIVE media coverage generated

0 media items measured

STAKEHOLDER ENGAGEMENTS: 2015–16

The table below lists events and meetings that facilitated a point of contact between the SAMRC, and its local and international key stakeholders during the reporting period.

ENGAGEMENT	OBJECTIVE
Sudan Ministerial Delegation, SAMRC & DST research collaboration meeting 17 March 2015	• Explore and identify future research collaborations between SAMRC and Sudan
GLoPID-R Meeting 4–5 May 2015	• To bring together research funders on a global scale to prepare for future outbreaks
7th SA Aids Conference 9–12 June 2015	• Profile progress made by SAMRC towards development of vaccines • Showcase SAMRC research results in HIV prevention • Afford SAMRC an opportunity to show its contribution towards developments in epidemiology, social history, prevention interventions and treatments available.
2nd World Congress on Healthy Ageing 30 July–2 August 2015	• SAMRC Non Communicable Diseases and Diabetes Discovery Units engaged the audience with information pertaining to healthy lifestyles
9th World Congress on Developmental Origins of Health and Disease 8–11 November 2015	• To address the many challenges that currently impact the health of mothers, unborn babies, infants, children and adolescents, as well as explore solutions, interventions and policies to optimise health across the life of people. • Profile SAMRC extramural unit- DPHRU
21st Annual Psychology Society of South Africa Congress 15–18 September 2015	• Showcase SAMRC collaborative research with UNISA
Drug policy Week 1–4 February 2015	• To share Alcohol Tobacco and Other Drugs Research Unit research work at the meeting
4th International Sexual Violence Research Initiatiative (SVRI) Congress/ Meeting 14–17 September 2015	• Gender and Health Research Unit was co-hosting the meeting • SAMRC contributed to the practical focus—the 'how to' of creating mutually enriching, sustainable partnerships in the sexual intimate partner violence (SIPV) field
Madagascar Ministerial delegation, SAMRC & DST meeting 14 October 2015	• To explore possible collaborations with Madagascar Department of Health • Engage Madagascar science experts with the SAMRC research focus areas
China Health Ministerial delegation visit the SAMRC 5 October 2015	• To explore possible collaborations with China Department of Health • Engage Chinese government of the SAMRC research focus areas
Randshow 25 March–3 April 2016	• To extend brand exposure • Demonstrate research translation from hard science to accessible science

PART C
GOVERNANCE

INTRODUCTION

The SAMRC Act provides for the governance of the organisation. As a Section 3A entity, it is accountable to Parliament for its performance and budget. As the SAMRC executive authority is the Department of Health, the Minister of Health is responsible for appointing the Board. The Board, in turn, is responsible for the corporate governance of the SAMRC. This includes fiduciary responsibility and compliance with legislative requirements, including the Public Finance Management Act (PFMA). In addition, the SAMRC Board appoints the SAMRC's President, who carries full responsibility for implementing the Board's mandate. The SAMRC President chairs the SAMRC's Executive Management Committee, which is responsible for the day-to-day management of the organisation.

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.

PORTFOLIO COMMITTEE ENGAGEMENT

The South African Medical Research Council is accountable to Parliament through the Parliamentary Portfolio Committee on Health. The SAMRC regularly responds to invitations from the Committee, and for the purposes of this report and the period in review, presented key strategic milestones and engaged members on important matters related to the mandate of health research.

Professor Glenda Gray, on 13 October 2015, presented a review of the organisation's 2014/15 achievements in addition to discussing planned strategic objectives for the upcoming financial year. The SAMRC's delegation, led by Professor Gray, engaged the Committee on the following matters of progress:

- As part of expanding the strategic research agenda of the organisation, the delegation, confirmed that R30 million was awarded to the country's historically under resourced universities with the aim of growing the next generation of African medical scientists and ultimately contributing to the prevention, reduction and control of disease.
- The SAMRC has, through collaborations with the Gates Foundation, the UKMRC-Newton Fund and PATH, secured R100 million of funding into the organisation for the next three years cementing its ability to lead medical innovation and technology development in the country.
- The presentation also alluded to the fact that the SAMRC now boasts eight new extramural research units and three cancer centres of research, and that research will focus on HIV/AIDS/TB, stem cell research, malaria and non-communicable diseases.

The Council announced that it made a significant investment in the areas of medical innovation and technology by funding 31 invention projects and confirmed that 101 research grants were awarded. The delegation further confirmed that more than 80 bursaries, scholarships and fellowships were provided to post-graduate participants and different universities.

The delegation also shared how the Council has placed significant emphasis on funding projects that seek to address the primary health-care challenges faced by communities in under-resourced communities and identifying innovative projects that can be taken to scale. The following projects were referenced that would assist the SAMRC to achieve this most needed outcome:

- A medical innovation to rapidly diagnose TB in resource-poor settings
- Urinary TB biomarkers
- Early detection of type 2 diabetes to improve the health of diabetics through prevention, early detection and treatment.

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".

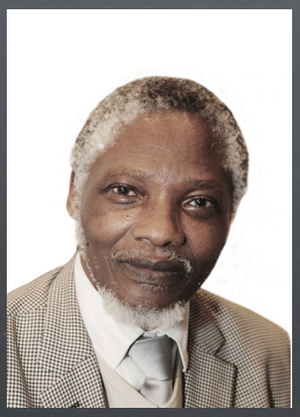
In essence, the Act mandates the Board to designate an Executive Management Committee, consisting of the President and other members who are employees of the SAMRC, and who, subject to the directives and control of the Board, are responsible for managing the affairs of the organisation in accordance with the objects and policy of the SAMRC.

PROF. MIKE SATHEKGE
CHAIRPERSON

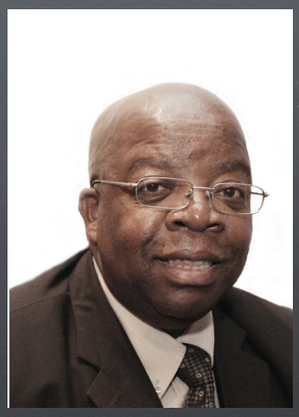
PROF. ZODWA DLAMINI
VICE-CHAIRPERSON

THE BOARD IS SUPPORTED BY A BOARD SECRETARY WHO FULFILS THE FOLLOWING ROLES AND RESPONSIBILITIES:

- Organising and recording the activities of Board and committee meetings in professional manner
- Advising and assisting the board regarding their duties and responsibilities
- Ensuring Board and committee packs and reports are professionally compiled and timeously distributed in consultation with the chairperson and CEO to the relevant parties
- Ensuring that statutory reports and returns are presented to the Board for approval
- Ensuring effective and efficient management of all logistical arrangements pertaining to Board activities
- Ensuring effective and accurate record-keeping of Board proceedings and resolutions in compliance with statutory requirements
- Acting as a communication and information channel for Board members
- Ensuring Board resolutions and directives are communicated and implemented by relevant parties
- Following up on Board matters (decisions and requests)
- Tracking and coordination of Board requests between the Board and management



PROF. KHAYA MFENYANA



PROF. PINDILE MNTLA

ADV. JOSEPHINE RALEFATANE

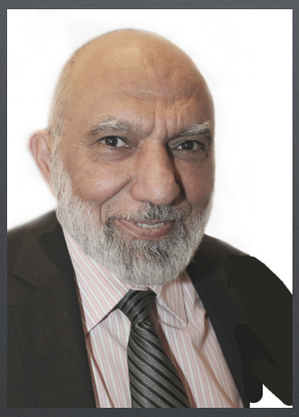
PROF. KEITSHEPILE SETSWE

DR FRANCESCA CONRADIE

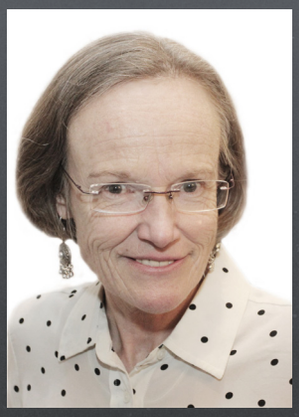
DR SIBONGILE GUMBI

DR ZILUNGILE KWITSHANA

PROF. CHARLES FELDMAN



PROF YUSUF OSMAN



DR PATRICIA HANEKOM

PROF. ELIZABETH ANNE BUKUSI

PROF. ANDREW WALUBO

PROF. KEBOGILE MOKWENA

MR NIZAR DAVIDS
BOARD SECRETARY

PROF. GLENDA E. GRAY
SAMRC PRESIDENT

NAME	DESIGNATION (IN TERMS OF THE PUBLIC ENTITY BOARD STRUCTURE)	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE
Prof. M Sathekge	Chairperson	1 Nov 2013	n/a	MB ChB, MMed (Nucl Med), PhD. Professor, Chief Specialist and Head of Department of Nuclear Medicine	Design and implementation of novel point-of-care targerted diagnostics and therapies using molecular nuclear medicine to address cancer and the dual curse (HIV &TB)
Prof. Z Dlamini	Vice-Chairperson	1 Nov 2013	n/a	BSc. BSc. Hons, MSc. PhD: Oesophageal Cancer	The "omics" technologies (transcriptomics, genomics and proteomics) including the use of bioinformatics to provide unprecedented possibilities to identify the underlying molecular basis of many common diseases including cancer.
Prof. K Mokwena	Member	1 Nov 2013	n/a	EdD: Health Education Administration, MSc (Physiotherapy, Higher Education Diploma; Certificate in Human Resource Development	Public health Health education and prevention Health behaviour change
Dr S Gumbi	Member	1 Nov 2013	n/a	PhD – Pharmacology	The development and commercialisation of biotechnologies, management of intellectual property, project investment and funding.
Dr P Hanekom	Member	1 Nov 2013	n/a	BSc; BVMCH (Veterinarian); Postgraduate Diploma in Economic Principles MSc in Financial Economics	Financial and economic analysis and research Strategic planning Project management Governance and accountability
Prof. C Feldman	Member	1 Nov 2013	n/a	MB BCH, DSc, PhD, FRCP, FCP(SA) Professor of Pulmonology & Chief Physician	Clinician: Community-acquired pneumonia including both clinical studies as well as basic research

BOARD DIRECTORSHIPS (LIST THE ENTITIES)	OTHER COMMITTEES OR TASK TEAMS (E.G.: AUDIT COMMITTEE/ MINISTERIAL TASK TEAM)	NO. OF MEETINGS ATTENDED
President of the College of Nuclear Physicians	Board	5
President of International Society of Radiolabeled Blood Elements (ISORBE)	ExCo	Consultative
Chair of the Technical Investment Committee of the Nuclear Technology Products (NTP)	Research & Development	3
DST Scientific Advisory Board (Preclinical Drug Development Platform)	Board	5
	ExCo	Consultative
	HR & Remuneration	4
Vista Clinic Properties	Board	5
National Health Research Committee (NHRC)	ExCo	Consultative
Adventist Professional Health and Human services (APHHS)	Research & Development (Chair)	4
AEC Amersham SOC	Board	4
	ExCo	Consultative
	HR & Remuneration (Chair)	4
Pikitup MOE	Board	5
Mapungubwe Institute for Strategic Reflection (MISTRA)	ExCo	Consultative
Maropeng a'Afrika (Pty) Ltd	Audit, Risk & IT (Chair)	4
n/a	Board	3
	Research & Development	2

NAME	DESIGNATION (IN TERMS OF THE PUBLIC ENTITY BOARD STRUCTURE)	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE
Prof. E Bukusi	Member	1 Nov 2013	n/a	Certificate in International Health Post Graduate diploma in International Research Ethics Bachelor of Medicine and Bachelor of surgery Masters of Medicine in Obstetrics and Gynaecology Master of Public Health (Epidemiology) Masters in Bioethics (MBE) PHD in Epidemiology AT&T Masters in Bioethics	Research focused on sexually transmitted infections, reproductive health, and HIV prevention, care and treatment Enhancing capacity to conduct socio-behavioural and biomedical research and provide HIV care through training and infrastructure development Research ethics and the development of systems and structures for regulation of research
Dr F Conradie	Member	1 Nov 2013	n/a	Dip HIV Man (CMSA) DTM&H (University of Witwatersrand) Dip Epidemiology (UOL) MBBCh (Wits)	HIV and multidrug resistant TB research. Registrational trials for new TB medications as well as shorter and less toxic regimens High-level technical assistance initiatives including ARV guidelines, MDR TB guidelines, resistance strategies and access to third line drugs.
Dr Z Kwitshana	Member	1 Nov 2013	n/a	Doctor of Philosophy (Immunology) Master of Medical Science Diploma Project Management National Higher Diploma Med Tech (Pathophys/ Immunology) Specialist Diploma Med.Tech. (Chemical Pathology) National Diploma Medical Technology (Clinical Pathology)	Immunological and nutritional impact of co-infection with HIV and neglected tropical diseases (Helminthiasis). Revitalising capacity in medical parasitology for national control of neglected tropical diseases

	BOARD DIRECTORSHIPS (LIST THE ENTITIES)	OTHER COMMITTEES OR TASK TEAMS (E.G.: AUDIT COMMITTEE/ MINISTERIAL TASK TEAM)	NO. OF MEETINGS ATTENDED
	Member Board of Trustees, HIV Research Trust UNAIDS Scientific Expert Panel International Partnership for Microbicides DSMB Advisory Panel Reduction of Early Mortality Advisory Committee AVAC BOM Multipurpose Prevention Technologies (MPT) Regional Chair and Global Co Chair of WHO RHD HRP Alliance	Board Research & Development	5 4
	Southern African HIV Clinicians Society (President) TB Transformative Science Group (TB TSG) of the AIDS Clinical Trial Group of the National Institute of Allergy and Infectious Diseases (NIAID) of the NIH	Board Research & Development ARIC	4 3 1
	Charles James Hospital Board SA Immunology Society International Journal of Maternal and Child Health and AIDS Editorial Board National Schistosomiasis Review Working Group (Group Leader) Mass Treatment Campaign Committee	Board Research & Development EXCO	5 4 Consultative

NAME	DESIGNATION (IN TERMS OF THE PUBLIC ENTITY BOARD STRUCTURE)	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE
Prof. K Mfenyana	Member	1 Nov 2013	n/a	Master of Arts in Educational Administration Master's Degree in Family Medicine (M. Prax. Med.) Bachelor of Medicine & Bachelor of Surgery (MBChB) Bachelor of Science (BSc) SA Teacher's Diploma (SATD)	Primary health care and medical education, especially community-based learning and service-learning
Prof. P Mntla	Member	1 Nov 2013	n/a	MBChB FCP SA FRCP (London)	Pericarditis, Peri-partum cardiomyopathy, systemic hypertension, especially in the black population, rheumatic fever and valvular heart diseases, especially in pregnancy
Prof. Y Osman	Member	1 Nov 2013	n/a	Bachelor of Dental Surgery (B.Ch.D.) Master of Dental Surgery (M.Ch.D.) Prosthodontics Hospital Leadership Honours Bachelors in Business and Administration Hons BBA Master of Business Administration (MBA)	Advances in dental materials and how this impacts on managing the burden of disease as regards oral health

	BOARD DIRECTORSHIPS (LIST THE ENTITIES)	OTHER COMMITTEES OR TASK TEAMS (E.G.: AUDIT COMMITTEE/ MINISTERIAL TASK TEAM)	NO. OF MEETINGS ATTENDED
	Health Professions Council of South Africa (HPCSA)	Board	3
	Chair of Professional Conduct Review Committee of the HPCSA (PCR) Chair of Education Training and Quality Assurance Committee of the HPCSA (ETQA) Interim Traditional Health Practitioners Council (ITHPC) Joint Health Sciences Education Committee (JHSEC) and Chair of Hopsice Association of Transkei (HAT)	Audit, Risk & IT	2
	Executive Committee of University Senate	Board	5
	Council of Physicians (CMSA) SA Hypertension Executive Council Civil Aviation Advisory Board Member of Clinical Trails Commitee MBC Member of SMU Council (Senate Representative) Member of Senate Academic Commissions Commitee Member of Academic Review Commitee	HR & Remuneration	3
	Health Professions Council of South Africa	Board	5
	Medical and Dental Board of the HPCSA (Executive Member) Post Graduate Education and Training Sub Committee (PETD) of the HPCSA (Chair). Examinations Subcommittee (Dental) of the Medical and Dental Board of the HPCSA Accreditation Panel HPCSA to accredit Prosthodontic under- and post-graduate Programmes in South Africa Medical Protection Society International Association of Dental Research (South African Division). Advisory body of the National Tender Board for Dental Materials and Dental Equipment Panel for evaluating dental materials for the Medicines Control Council Accreditation panel for dental materials and products for the South African Dental Association (SADA) Editorial Board of the Journal of the South African Dental Association	Audit, Risk & IT	4
		EXCO	Consultative

NAME	DESIGNATION (IN TERMS OF THE PUBLIC ENTITY BOARD STRUCTURE)	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE
Adv. J Ralefatane	Member	1 Nov 2013	n/a	Admitted Advocate of the Supreme Court of SA B. Proc. Degree LLB Degree Bookkeeping Diploma Certificate in Labour Relations Certificate in Computer literacy Certificate in Human Rights Certificate in Land Reform Certificate in Audit Committee	Practice in Law, Labour Law , Concilation, Mediation, Arbitration, Facilitation, Disciplinary Hearings, Legal Opinions/Advice, Forensic Investigations, Change Management, Policy Drafting, Drafting of Legal Documents/Contracts/Legislation, Consulting, Risk Management, Strategic Planning, Organisation Development Planning,
Prof. K Setswe	Member	1 Nov 2013	n/a	Doctor of Public Health (DrPH) Certificate in Management for International Public Health (MIPH) Master of Public Health (MPH), (Community Health Education) Honours B. Cur (Advanced Community Nursing) Diploma in Industrial Relations (Diploma Industrial Relations) Certificate in Primary Health Care and Restructuring the Health Sector Diploma in Health Services Management (DHSM) B.A Cur (Nursing Education and Community Nursing Science)	The behavioural & social aspects of HIV/AIDS/TB/STI, AIDS/TB policy, epidemiology and general public health issues

BOARD DIRECTORSHIPS (LIST THE ENTITIES)	OTHER COMMITTEES OR TASK TEAMS (E.G.: AUDIT COMMITTEE/ MINISTERIAL TASK TEAM)	NO. OF MEETINGS ATTENDED
.ZA Domain Name Authority (Chair) Technology Innovation Agency (TIA) Board	Board	4
ITSAA Appeal Board (Chair) Ephraim Mogale Local Municipality Audit Committee (Chair) South African State Theatre (Acting Chair) Luthuli Museum (Deputy Chair) Refugee Appeal Board National Museum Board SALGA Audit Committee Ekurhuleni East College Audit Committee South African Pharmacy Council Audit Committee BLA Gender Committee Road Accident Fund (RAF) Risk Management Committee Gauteng Enterprise Propeller (GEP) Business Development Sedibeng Water (Director)	Audit, Risk & IT	3
Development Bank of Southern Africa AIDS Advisory Committee (Chair)	Board	4
Lilly Foundation Southern Africa Member: HSRC Press Editorial Board Member: Council of the University of Venda. Serve in the Senate, Finance and Human Resources Committees. Member of the Clinical Committee of the NCC Member of the Biological Committee of the NCC	HR & Remuneration	3

NAME	DESIGNATION (IN TERMS OF THE PUBLIC ENTITY BOARD STRUCTURE)	DATE APPOINTED	DATE RESIGNED	QUALIFICATIONS	AREA OF EXPERTISE
Prof. A Walubo	Member	1 Nov 2013	n/a	MBCHB M.Phil M.D (Doctor of Medicine) Post. Doc. Fellow (Vanderbilt, USA) MBA F.C.P (ACCP) Associate (Coll.Clin.Pharm.SA)	Clinical pharmacology, drug metabolism & transport, quality Practices (GLP and GCP), immunopharmacology and traditional medicines

BOARD DIRECTORSHIPS (LIST THE ENTITIES)	OTHER COMMITTEES OR TASK TEAMS (E.G.: AUDIT COMMITTEE/ MINISTERIAL TASK TEAM)	NO. OF MEETINGS ATTENDED
International Society for the Study of Xenobiotics	Board	3
African Society for Drug Metabolism and Development (Founder President) President, SA College of Clinical Pharmacologist College of Medicines of South Africa Senate Free Stare Provincial Therapeutics Committee Adverse Events Committee of the Free State Academic Health Complex	HR & Remuneration	5

RISK MANAGEMENT

The Board has ultimate responsibility to ensure that a holistic approach to risk management is in place to understand, evaluate and mitigate risk at the SAMRC. The Board has delegated to the Audit, Risk & IT Committee (ARIC) the oversight role regarding strategic and operational risks, internal financial controls and fraud risk as it relates to financial reporting, and information technology risks as it relates to operational and financial reporting. The ARIC in turn, reports and escalates risk issues back to the Board. The Entity-wide Risk Management Unit (ERMU) at SAMRC is a dedicated department that reports directly to the ARIC and has primary responsibility for the design, implementation and monitoring of enterprise-wide risk management across the SAMRC and its integration into the day-to-day activities.

The SAMRC's approach to ERM entails the proactive management and mitigation of risk under the guidance of the President, SAMRC Executive Management and the Board, and it has put in place a number of risk control strategies and policy documents designed to govern risk management within the organisation. These are subject to annual review to ensure alignment with international best-practice and the SAMRC business environment. The current governance policies, reviewed during the 2015/16 year, relating to risk management include:

- Risk Management Strategy
- Risk Management Policy
- Risk Appetite and Tolerance Framework
- Fraud Prevention Policy
- Combined Assurance Framework Policy
- Code of Business Conduct

The ERMU has the vision of contributing to the achievement of the SAMRC's overall vision of building a healthy nation through research by managing the governance issues and risks that could detract from this ultimate goal.

Major risks that could influence the achievement of the SAMRC's strategic objectives are actively and continuously identified throughout the organisation, together with the current mitigation strategies. Where appropriate, management action plans to further improve the management of the risk are timeously developed and implemented. As such, risk assessments at both organisational (strategic) as well as at all key business unit (operational) levels have been completed.

Operational level workshops extend across both support and research units, with the latter including hazards identification within the workplace. As part of the risk assessment workshops, extensive risk awareness sessions were held to ensure that principles around risk are communicated and embedded throughout the organisation. Risk dashboards are utilised to report to the Executive Management Committee and Audit, Risk & IT Committee. These quarterly reports form the basis of the continuous monitoring on the status of 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.

ERMU will to continue to embed risk management principles and the methodology, and continue with the implementation of a process to ensure follow-up by management of their risk intervention action plans to reduce the risk exposure to the SAMRC.

The SAMRC has adopted a common and integrated approach to monitoring the SAMRC's strategic, research, clinical trial and other operational risks. The SAMRC risk management process encompasses the following:

Key risks and mitigating activities:

During the financial year under review, the SAMRC Executive Management and Board identified, and took necessary mitigating actions, on the key business risks identified. The table below shows the alignment between strategic focus areas and business risks facing the organisation.

KEY BUSINESS RISKS	RISK MITIGATION DECISIONS AND KEY ACTIONS TAKEN / IN PROGRESS
Strategic Goal 1: Administer health research effectively and efficiently in South Africa	
Strategic communication challenges	• Roles and responsibilities to be further clarified between Board and Executive Management • Development of an internal/external stakeholder communication plan
Inefficiencies in corporate processes	• Contracts in place for 80% procurement spend • Implementation of pre-contract management award processes • Implement contract management software
Outdated SAMRC Act	Assist DoH in the review and drafting of a updated SAMRC Amendment Act
Insufficient facility management, including movable and immovable assets	Capital projects plan to improve physical infrastructure to be implemented
Non-compliance to legal and regulatory requirements as well as policies and procedures	No further actions identified
Strategic Goal 2: Lead the generation of new knowledge and facilitate its translation into policies and practices to improve health	
Formation of NAPHISA: Overlap in mission and research between the SAMRC and NAPHISA	Engage with DoH on the establishment of NAPHISA, its priorities to be established and the possible conflict with SAMRC mandate that may arise
Inferior quality of research output/Lack of research integrity	• Development of formal guidelines for data management • Establish a Research Integrity Office/quality assessment department for intramural and extramural research units • Implement a quality review process for all externally funded projects, including flagship and SHIP projects
Research focus not aligned to national health priorities	Establishment of a Scientific Advisory Committee
Ineffective research ethics committee	Increase administrative support of the SAMRC Ethics Committee
Ineffective management of extramural research	• Establish coherent administration and management structures for extramular units (EMU's) • Strengthen communication channels and stakeholder engagement with extramural units - both at an organisational and research unit level
Limited SAMRC national research footprint	• Initiate roadshows with specifically identified universities • Establish strategic partnerships to spread the SAMRC's footprint
Transformation challenges	• Approval of the draft EE strategy and plan • Implement the Transformation Forum
Inability to attract, develop and retain appropriately skilled staff or sufficient capacity	• Appointment of a talent manager to assist with the development of talent • Roll out of leadership interventions, coaching and mentoring programmes
Inability to sustainably grow funding	No further actions identified
Strategic Goal 3: Support innovation and technology development to improve health	
Ineffective support for innovation, partnerships, platforms and technology development	Appointment to the newly created SHIP Commercialisation Director/Specialist post to be implemented
Strategic Goal 4: Build capacity for the long-term sustainability of the country's health research	
Limited research capacity	Establish strategic relations with institutions for collaboration and accessing researchers to build clinical research capacity

INTERNAL CONTROL AND ASSURANCE

The SAMRC has a number of management controls and governance structures in place to provide assurance on the status of governance and control at an organisational level. These include clearly defined and documented processes, policies approved by the Board which are accessible to all staff via the intranet, and clearly defined procedures and work practices. While the Board is ultimately responsible for the internal controls at the SAMRC, this function is delegated to the President to ensure that business risks in particular are properly managed. The Board relies on the Audit Risk & IT Committee to monitor and report on the status of internal controls at the SAMRC.

A system of internal control has different assurance providers that provide different levels of comfort and assurance on the effectiveness of those controls. Internal controls, which are designed to provide reasonable assurance that organisational objectives will be achieved, are dependent on various processes within the SAMRC, namely internal control measures, management and assurance providers – both external and internal.

Management plays a very crucial role in terms of internal control, as the "first line of defence", in the day-to-day activities of the organisation. Other "control measures" include the oversight responsibilities of certain committees (e.g. health & safety, legal and risk) and the role of assurance providers. A combined assurance model is applied to provide a coordinated approach to all assurance activities. The process of combined assurance allows visibility over what assurance is provided and, by whom within, an organisation. Combined assurance aims to help an organisation understand its levels of assurance and where it can improve or address these levels to manage organisational risk. The ARIC is responsible for monitoring the appropriateness of the organisation's combined assurance model and ensuring that significant risks facing SAMRC are adequately addressed.

Based upon the SAMRCs Combined Assurance Framework, a Preliminary Basic Combined Assurance Plan (Plan) was developed during the current year, directly linked to the strategic risks as approved by the Board and identifies three categories of assurance providers, namely:

- First line of defence: management
- Second line of defence: Internal structures and committees
- Third line of defence: Auditor-General, internal audit and other independent assurance providers, e.g. Ethics Committee for Research on Animals

The Auditor-General is responsible for expressing an opinion on the financial statements and reporting on findings relating to the audit predetermined objectives and material non-compliance with specific requirements in key applicable legislation. The SAMRC outsourced internal audit (IA) function derives its independence from its charter, which has been approved by the Board. IA reports functionally to the ARIC and has a direct line of communication to the chairman of the ARIC. IA provides an independent, objective assurance and consulting service designed to add value and improve the organisation's operations. It helps the organisation accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

COMPLIANCE WITH LAWS AND REGULATIONS

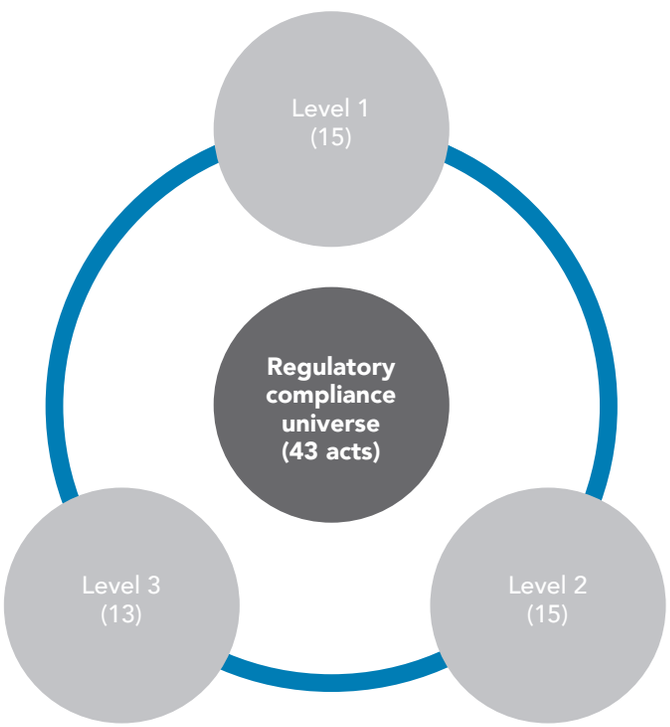
The Board is responsible for the SAMRC's compliance with laws and regulations, and ensures that the organisation implements processes that are effective. The Board has a duty to identify the laws, regulations, and non-binding rules and standards applicable to the SAMRC.

The ERMU continued, in conjunction with various internal stakeholders, to identify and monitor compliance with key legislation relevant to the SAMRC because the function of compliance has been delegated throughout the SAMRC based on specialist areas. This includes, inter alia, the Legal & Compliance Services Division responsible for ensuring contracts between the SAMRC and outside parties do not contravene any law or regulation, Human Resources ensuring compliance with relevant labour laws, and Health, Safety & Environment Unit over the OHSA Act and related regulations. The annual audit also provides comfort over certain areas such as PFMA compliance, law and accounting regulations.

As a principle the SAMRC does not tolerate non-compliance with laws and regulations. Through the EMRU, the recording of non-compliance using the category levels below, provides ARIC and the Board with an on-going view of any non-compliance within the environment.

The SAMRC has developed an initial regulatory compliance universe that contains a list of 43 Acts that are applicable to the organisation. The identified Acts are categorised onto three categories, namely:

- Level 1 – Primary Act to comply with. Legislation that affects the day-to-day operations of the SAMRC. Failure to comply could very likely lead to adverse audit findings
- Level 2 – Secondary Act. Legislation that affects only certain business units or certain of the day-to-day operations of the SAMRC. Failure to comply may or may not lead to adverse audit findings.
- Level 3 – Indirect applicable legislation. Legislation or certain sections thereof applies to the SAMRC in an indirect manner. Acts will not result in significant benefits or non-compliance matters.
- The regulatory compliance universe that contains the list of 43 Acts that are applicable to the SAMRC are depicted in the figure below.



FRAUD AND CORRUPTION

The SAMRC has a zero tolerance to fraudulent behaviour and is committed to the prevention of fraud. The SAMRC places a priority on the identification and eradication of fraud, corruption and misconduct of any sort. The SAMRC Fraud Prevention Policy addresses fraud risk management both proactively and reactively. The fraud prevention plan developed by the ERMU includes a fraud strategy as one of the outputs of the plan. The components of the SAMRC's fraud strategy consist of prevention, detection, investigation and response. The prevention of fraud is the most important component of the SAMRC's strategy in dealing with fraud.

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.

The SAMRC has developed an on-line whistle-blower hotline where staff can report fraudulent activities/incidents anonymously. The web-page, "Report fraudulent activities at the SAMRC", is available to all staff on 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 treated with the utmost confidentiality to protect the rights of both the whistle-blower and the alleged party.

MINIMISING CONFLICT OF INTEREST

Each SAMRC employee is required to declare any potential conflict of interest on an annual basis. Failure to disclose his/her interests, or the wilful provision of incorrect or misleading details can lead to charges of misconduct. It is important to note that an "interest" declared is not necessarily considered to be a conflict of interest. It is understood that, in general, individuals who are involved in a particular activity have a professional interest in the subject. By implication, all employees of the SAMRC, and its Board and sub-committees, have a professional interest in the work they are undertaking and in the outcome of these activities. A conflict of interest arises when the employee's personal activities and relationships interfere, or appear to interfere, with the employee's ability to act in the best interest of the SAMRC.

To provide staff with a more efficient and effective solution when having to respond to the requirements of annual disclosure, SAMRC has implemented an on-line declaration of interest tool. All outside work, financial and private interest, and any other business activities must be declared when completing the SAMRC staff annual on-line declaration of Interest.

Where these relate to dealings with any state entity, full declaration must be provided as required in the on-line declaration of interest. SAMRC staff are entrusted with public funds and as such, they need to maintain the highest standards of professional ethics.

In addition, a code of conduct for supply chain management (SCM) practitioners and other role players was implemented, whereby conflicts of interest are declared on an annual basis in addition to the SAMRC-wide annual on-line declaration process.

CODE OF CONDUCT

The Code of Business Conduct Framework Policy, approved by the Board, is intended to prevent unethical behaviour and encourage ethical behaviour. This balance of business conduct is directed at the SAMRC's internal stakeholders (Board, managers and employees) and external stakeholders such as suppliers. The Code will help to define the parameters of the spirit of the SAMRC's business and research conduct, ethics and personal ethos of staff. This is based on the key principles of fairness, accountability, responsibility, transparency, justice and standards that will contribute to uphold the integrity, credibility and reputation of the SAMRC and its stakeholders. We strive at all times to fulfil these obligations. Our core values are the following:

- Excellence and innovation - high quality, original, scientific integrity, peer review
- Relevance - high impact, needs-driven
- Accountability - responsibility, teamwork, leadership, participation
- Respect and communication - dignity, honesty, fairness, integrity, transparency, freedom to challenge
- Capacity development - reward, recognition, talent management and transformation

It is the responsibility of each and every employee to ensure that he/she complies with the provisions of the Code.

In an event where an employee breaches the provisions of the policy, any employee breach of this policy will be addressed in terms of the Disciplinary and Grievance Policy.

SAMRC'S MATERIALITY AND SIGNIFICANCE FRAMEWORK: 2015/2016

The Materiality and Significance Framework for the SAMRC, in terms of the Treasury Regulation 28.3.1 and the National Treasury Practice Note on Applications under of Section 54 of the Public Finance Management Act (PFMA), is as follows.

Section 50: Fiduciary duties of accounting authorities

1. The Accounting Authority for a public entity must –

PFMA SECTION	QUANTITATIVE (AMOUNT)	QUALITATIVE (NATURE)
(c) on request, disclose to the Executive Authority responsible for that public entity or the legislature to which the public entity is accountable, all material facts, including those reasonably discoverable, which in any way may influence the decisions or action of the Executive Authority or that legislature;	Disclose all material facts.	The Board will disclose to the National Department of Health all material facts as requested and all material facts not requested, including those reasonably discoverable, which in any way may influence the decisions or action of the National Department of Health, at the discretion of the Board.

Section 51: General responsibilities of accounting authorities:

1. An Accounting Authority for a public entity –

PFMA SECTION	QUANTITATIVE (AMOUNT)	QUALITATIVE (NATURE)
(g) must promptly inform the National Treasury on any new entity which that public entity intends to establish or in the establishment of which it takes the initiative, and allow the National Treasury a reasonable time to submit its decision prior to formal establishment; and	Disclose all material facts timeously.	Full particulars to be disclosed to the Minister of Health for approval after which it is to be presented to Treasury.

Section 54: Information to be submitted by accounting authorities

2. Before a public entity concludes any of the following transactions, the Accounting Authority for the public entity must promptly and in writing inform the relevant Treasury of the transaction and submit relevant particulars of the transaction to its Executive Authority for approval of the transaction:

PFMA SECTION	QUANTITATIVE (AMOUNT)	QUALITATIVE (NATURE)
a) establishment of a company;	Any proposed establishment of a legal entity.	Full particulars to be disclosed to the Minister of Health and Minister of Finance (National Treasury) for approval (simultaneous submission).
b) participation in a significant partnership, trust, unincorporated joint venture or similar arrangement;	Qualifying transactions exceeds R10m (based on 2% of total average SAMRC assets, as at 31 March 2015). This includes research collaborative arrangements.	
c) acquisition or disposal of a significant shareholding in a company;	Greater than 20% of shareholding.	
d) acquisition or disposal of a significant asset;	Qualifying transactions exceeds R10m (based on 2% of total average SAMRC assets, as at 31 March 2015) including financial leases.	Any asset that would increase or decrease the overall operational functions of the SAMRC, outside of the approved strategic plan and budget.
e) commencement or cessation of a significant business activity; and	Any activity not covered by the mandate/core business of the SAMRC and that exceeds the R10m transaction value (based on 2% of total average SAMRC assets, as at 31 March 2015).	Full particulars to be disclosed to the Minister of Health and Minister of Finance (National Treasury) for approval (simultaneous submission).
f) a significant change in the nature or extent of its interest in a significant partnership, trust, unincorporated joint venture or similar arrangement.	Qualifying transactions exceeds R10m (based on 2% of total SAMRC assets, as at 31 March 2015)	

Section 55: Annual report and financial statements

2. The annual report and financial statements referred to in subsection (1) (d) ("financial statements") must –

a. fairly present the state of affairs of the public entity, its business, its financial results, its performance against predetermined objectives and its financial position as at the end of the financial year concerned;
b. include particulars of –

PFMA SECTION	QUANTITATIVE (AMOUNT)	QUALITATIVE (NATURE)
(i) any material losses through criminal conduct and any irregular expenditure and fruitless and wasteful expenditure that occurred during the financial year:	All instances.	Report quarterly to the Minister of Health. Report annually in the Annual Financial Statements.
(ii) any criminal or disciplinary steps taken as a consequence of such losses or irregular expenditure or fruitless and wasteful expenditure;		
(iii) any losses recovered or written off;		
(iv) any financial assistance received from the state and commitments made by the state on its behalf; and		
(v) any other matters that may be prescribed.	All instances, as prescribed.	

Section 56: Assignment of powers and duties by Accounting Authorities

PFMA SECTION	QUANTITATIVE (AMOUNT)	QUALITATIVE (NATURE)
1. The Accounting Authority for a public entity may — a. In writing delegate any of the powers entrusted or delegated to the Accounting Authority in terms of this Act, to an official in that public entity; b. Instruct an official in that public entity to perform any of the duties assigned to the Accounting Authority in terms of this Act.	Values excluded from the Delegation of Authority Framework Policy.	Instances that are excluded from the Delegation of Authority Framework Policy.
2. A delegation or instruction to an official in terms of subsection (1) — c. (Is subject to any limitations and conditions the Accounting Authority may impose; d. (May either be to a specific individual or to the holder of a specific post in the relevant public entity; and e. Does not divest the Accounting Authority of the responsibility concerning the exercise of the delegated power or the performance of the assigned duty.	Values excluded from the Delegation of Authority Framework Policy.	Instances that are excluded from the Delegation of Authority Framework Policy.

Treasury circulars and guidelines related to supply chain management

National Department of Health and National Treasury are to:

1. be notified of procurement transactions exceeding R10m;
2. be informed of amounts in excess of
    a. 20% or R20m (including applicable taxes) for construction related orders; and
    b. 15% or R15m (including applicable taxes) for goods/service related orders

The materiality level mentioned above was calculated using the guidance practice note of the National Treasury. Using these parameters, the SAMRC materiality level calculation outcomes were as follows:

ELEMENT	PERCENTAGE (%) RAND TO BE APPLIED AGAINST R VALUE	UNAUDITED VALUE AT 31 MARCH 2015	CALCULATED MATERIALITY AND SIGNIFICANCE VALUE
Total assets (1–2%)	2%	R471,715,579.00	R9,434,311.58

The SAMRC Materiality and Significant Value will be R10m based on the highest percentage of the total asset element and the significant fluctuations in the month-to-month total asset value. This is the most stable element, given the performance statement outcomes associated with the current economic climate challenges.

PART D
HUMAN RESOURCES MANAGEMENT

OVERVIEW

In the year under review Human resources has focussed on creating an enabling platform to attract, recruit, motivate and retain talented individuals in a positive, diverse, healthy and safe work environment. The SAMRC has embarked on meaningful transformation and equitable representation to specifically target management of research units. Through effective talent management, the SAMRC ensures high levels of research and other productivity in pursuance of its vision. HR has also facilitated a process of positive engagement with organised labour, amongst others, resulting in remunerating all staff in line with competitive market trends.

HR PRIORITIES FOR THE YEAR UNDER REVIEW

- To drive transformation with full commitment from Executive leadership, including transformation targets being set for all Units/Divisions, to be monitored by the Transformation Forum
- The search for a HR Executive on the leadership team
- To review the SAMRC's remuneration policy, awaiting final ministerial approval
- To support and empower line managers to take charge of HR line activities
- Revision of fixed term contract policy, to open the opportunity for indefinite contracts in an attempt to provide further job security to critical staff
- Increased awareness programs and utilisation of the Wellness Programme at individual, group and corporate levels
- Successful negotiation of 2015 performance bonuses for staff

EMPLOYEE PERFORMANCE MANAGEMENT FRAMEWORK

The employee performance management framework consists of the following elements:

- Individual performance goals and targets as per standardised performance criteria for all job levels and categories, in line with strategic goals of units/ departments, aligned with SAMRC organisational goals, objectives and targets. On-going monitoring of employee performance takes place through formal assessments twice a year, with managers encouraged to have more frequent unofficial performance updates.
- Performance management cycle: The cycle is aligned to the financial year and final individual performance results have been submitted accordingly.
- Standardised performance criteria ensured that expected outcomes are known to employees and aligned with the strategic goals of the organisation, that job profiles for different levels are measured consistently across the SAMRC, and that performance evaluations are fair in terms of agreed and known standards for similar job types across different units.

EMPLOYEE WELLNESS PROGRAMME

The employee wellness programme provides support and assistance to employees and managers with regards to on-site counselling (and other) sessions to assist staff experiencing personal, work-related and other problems, HIV treatment and chronic disease management, 24/7/365 toll-free services, health risk assessments, alcohol abuse referrals, psycho-social services and managing absenteeism.

HR has facilitated increased promotion of the programme at individual (15%) and organisational (42%) levels, resulting in more briefing and training sessions for both employees and managers. There has been an increase in the utiliasition of the programme and related services, including spontaneous requests from units to offer support in related topics such as anger and stress management trauma debriefing. It has provided mmanagers with a tool to assist staff in identifying and addressing matters of poor work performance or other socio-psychological problems in the work place.

ACHIEVEMENTS

- The establishment of a transformation forum, supplemented by employment equity targets set for all units. All appointments are considered against these said targets.
- Successful salary negotiations with organised labour, settling within budget, on a sliding scale, and on average market related increases.
- Promotion of 54 employees to higher job levels across all categories, levels, race and gender.
- An increase in the utilisation of the employee wellness programme, providing a relief to staff when experiencing personal or other work related problems.
- Management of services rendered employment under control.
- Sound working relationship with organised labour, with attempts to resolve disputes internally as far possible.

CHALLENGES FACED

- Leadership and development of management skills in senior critical positions.
- Retention of critical and scarce skills.
- Revamping performance management to include work profiles and revision of standards across all levels and categories.
- Transformation at an increased tempo versus a small growth in organisational numbers and low labour turnover.
- To create a brand of employer of choice for employment.
- HR to be seen and trusted as a strategic partner, including a driver for business growth and advancement.
- To appoint a dynamic and esteemed HR Executive.
- To resolve outstanding disputes with organised labour.
- To improve internal staff morale.
- To complete implementation of the space process as soon as possible and without major disruptions.
- Relationship between the SAMRC Board and EMC.
- To introduce succession planning, including an opportunity for deputy directors.
- Continuous review and successful roll out of HR policies in line with legal requirements.
- Managing contract employment within the context of new labour legislation.

FUTURE HR PLANS AND GOALS

- To have HR as a fully-fledged business support services department to enable the organisation to get to greatness.
- To continue to attract, develop and retain critical and scarce talent.
- Further improve our remuneration and reward strategy to be in line with market trends, to get the revised policy approved at ministerial levels, and to consult with labour on matters including career development and performance bonus criteria.
- To improve on standardising stringent performance criteria throughout the organisation.
- To develop interventions to restore staff morale.
- To continue fostering a healthy relationship with the union.
- To assist the organisation in meeting its employment equity target at senior management level.
- To have a set of standardised job profiles for different job levels and categories.
- To have an integrated HR system, which will include the automation of some processes within HR e.g. online recruitment system, electronic update of employee information and performance management system.
- To continuously revise HR policies and practises in terms of legislative requirements, market and best practices

HUMAN RESOURCE OVERSIGHT STATISTICS

EXPENDITURE

The following table summarises the final audited expenditure by salary bands (Table 1). In particular, it provides an indication of the amount spent on personnel costs in terms of salary bands.

TABLE 1: PERSONNEL COSTS BY SALARY BANDS, 2015/16

SALARY BAND	PERSONNEL EXPENDITURE (R)	% OF TOTAL PERSONNEL COST	AVERAGE PERSONNEL COST PER EMPLOYEE (R)
Lower skilled (levels 1–2)	3 227 407	1	119 534
Skilled (level 3–5)	18 135 881	6	149 883
Highly skilled production (levels 6–8)	86 521 485	31	313 484
Highly skilled supervision (levels 9–12)	93 332 357	33	630 624
Senior management (levels 13–16)	76 718 899	28	3 288 278
Interns	3 031 857	1	151 593

The following tables provide a summary per programme (Table 2 and salary bands (Table 3), of expenditure incurred as a result of salaries, overtime, home owners allowance and medical assistance. In each case, the table provides an indication of the percentage of the personnel budget that was used for these items.

TABLE 2: SALARIES, OVERTIME, HOME-OWNERS, ALLOWANCE AND MEDICAL ASSISTANCE BY PROGRAMME, 2015/16

PROGRAMME	SALARIES		OVERTIME		HOME-OWNERS ALLOWANCE	
	Amount (R)	Salaries as a % of personnel cost	Amount (R)	Overtime as a % of personnel cost	Amount (R)	HOA as a % of personnel cost
Band A	3 227 407	3	9 957	0.01	0	0
Band B	18 135 881	17	206 857	0.2	0	0
Band C	86 521 485	80	272 458	0.3	0	0
Total	107 884 773	100	489 272	0.51	0	0

TABLE 3: SALARIES, OVERTIME, HOME-OWNERS, ALLOWANCE AND MEDICAL ASSISTANCE BY SALARY BANDS, 2015/16

SALARY BAND	SALARIES		OVERTIME		HOME-OWNERS ALLOWANCE	
	Amount (R)	Salaries as a % of personnel cost	Amount (R)	Overtime as a % of personnel cost	Amount (R'000)	HOA as a % of personnel cost
Lower skilled (Levels 1–2) A	3 227 407	1	9 957	0.003	0	0
Skilled (Levels 3–5) B	18 135 881	6	206 857	0.074	0	0
Highly skilled production (Levels 6–8) C	86 521 485	31	272 458	0.097	0	0
Highly skilled supervision (Levels 9–12) D	93 332 357	33	5 662	0.002	0	0
Senior management (Levels 13–16) E–F	76 718 899	28	17 604	0.006	0	0
Interns	3 031 857	1	968	0.000	0	0
Total	280 967 686		513 506	0.18	0	0

EMPLOYMENT AND VACANCIES

The following table summarises the number of posts on the establishment, the number of employees, the vacancy rate, and whether there are any staff that are additional to the establishment.

TABLE 4: EMPLOYMENT AND VACANCIES BY SALARY BANDS, 31 MARCH 2016 (INCLUDES PERMANENT AND CONTRACT STAFF)

SALARY BAND	NUMBER OF POSTS	NUMBER OF POSTS FILLED	VACANCY RATE (%)	NUMBER OF POSTS FILLED ADDITIONAL TO THE ESTABLISHMENT N/A
Lower skilled (Levels 1–2)	26	26	0	0
Skilled (Levels –35)	83	83	0	0
Highly skilled production (Levels 6–8)	237	221	7	0
Highly skilled supervision (Levels 9–12)	133	125	6	0
Senior management (Levels 13–16)	64	57	11	0

JOB EVALUATION

The following table summarises the number of posts on the establishment, the number of employees, the vacancy rate, and whether there are any staff that are additional to the establishment.

TABLE 5: JOB EVALUATION, 1 APRIL 2015 TO 31 MARCH 2016

SALARY BAND	NUMBER OF POSTS	NUMBER OF JOBS EVALUATED	% OF POSTS EVALUATED BY SALARY BANDS	POSTS UPGRADED		POSTS DOWNGRADED	
				NUMBER	% OF POSTS EVALUATED	NUMBER	% OF POSTS EVALUATED
Lower skilled (Levels 1–2)	34	0	0	0	0	0	N/A
Skilled (Levels 3–5)	75	4	59	2	50	0	N/A
Highly skilled production (Levels 6–8)	213	33	15	28	85	0	N/A
Highly skilled supervision (Levels 9–12)	133	27	20	21	78	0	N/A
Senior management	57	5	8	3	75	0	N/A
Total	512	69	13	54	78	0	N/A

The following table provides a summary of the number of employees whose salary positions were upgraded due to their posts being upgraded. The number of employees might differ from the number of posts upgraded since not all employees are automatically absorbed into the new posts and some of the posts upgraded could also be vacant.

TABLE 6: PROFILE OF EMPLOYEES WHOSE SALARY POSITIONS WERE UPGRADED DUE TO THEIR POSTS BEING UPGRADED, 1 APRIL 2015 TO 31 MARCH 2016

BENEFICIARIES	AFRICAN	ASIAN	COLOURED	WHITE	TOTAL
Female	17	5	11	6	39
Male	6	3	4	2	15
Total	23	8	15	8	54
Employees with a disability	0	0	0	0	0

The following table summarises the number of cases where remuneration levels exceeded the grade determined by job evaluation. Reasons for the deviation are provided in each case.

TABLE 7: EMPLOYEES WHOSE SALARY LEVEL EXCEED THE GRADE DETERMINED BY JOB EVALUATION, 1 APRIL 2015 TO 31 MARCH 2016 (IN TERMS OF PSR 1.V.C.3)

TOTAL NUMBER OF EMPLOYEES WHOSE SALARIES EXCEEDED THE GRADES DETERMINED BY JOB EVALUATION IN 2015/16	0

EMPLOYMENT CHANGES

Turnover rates provide an indication of trends in the employment profile of the department. The following table provides a summary of turnover rates by salary band.

TABLE 8: ANNUAL TURNOVER RATES BY SALARY BAND, 1 APRIL 2015 TO 31 MARCH 2016

SALARY BAND	NUMBER OF EMPLOYEES PER BAND AS ON 1 APRIL 2016	APPOINTMENTS AND TRANSFERS INTO THE DEPARTMENT	TERMINATIONS AND TRANSFERS OUT OF THE DEPARTMENT	TURNOVER RATE (%)
Lower skilled (Levels 1–2)	26	0	12	46
Skilled (Levels 3)	83	20	32	39
Highly skilled production(Levels 6–8)	221	30	65	29
Highly skilled supervision(Levels 9–12)	125	13	27	22
Senior management	57	2	6	11

**Predominantly as a result of contract terminations*
Formula used: Band terminations / band total = turnover rate (%)

TABLE 9: REASONS WHY STAFF ARE LEAVING THE DEPARTMENT

TERMINATION TYPE	NUMBER	% OF TOTAL
Death	-	-
Resignation	66	46
Expiry of contract	69	49
Dismissal – operational changes	1	0.7
Dismissal – misconduct	1	0.7
Dismissal: Inefficiency	N/A	N/A
Discharged due to ill-health	N/A	N/A
Retirement	4	3
Transfers to other public service departments	N/A	N/A
Terminations	N/A	N/A
Other: Retrenchment	1	0.7
Total	142	100
Total number of employees who left as a % of the total employment	N/A	N/A

TABLE 10: PROMOTIONS BY SALARY BAND

SALARY BAND	EMPLOYEES 1 APRIL 2016	PROMOTIONS TO ANOTHER SALARY LEVEL	SALARY BANDS PROMOTIONS AS A % OF EMPLOYEES BY SALARY LEVEL	PROGRESSIONS TO ANOTHER NOTCH WITHIN A SALARY LEVEL	NOTCH PROGRESSIONS AS A % OF EMPLOYEES BY SALARY BAND
Lower skilled (Levels 1–2)	34	0	0	N/A	N/A
Skilled (Levels 3–5)	75	2	3	N/A	N/A
Highly skilled production (Levels 6–8)	213	28	13	N/A	N/A
Highly skilled supervision (Levels 9–12)	133	21	16	N/A	N/A
Senior management (incl. Paterson F Top management)	57	3	6	N/A	N/A
Total	**512**	**54**	**11**	**N/A**	**N/A**

EMPLOYMENT EQUITY

The tables in this section are based on the formats prescribed by the Employment Equity Act, 55 of 1998.

TABLE 11: TOTAL NUMBER OF EMPLOYEES (INCLUDING EMPLOYEES WITH DISABILITIES) IN EACH OF THE FOLLOWING OCCUPATIONAL CATEGORIES, 31 MARCH 2016

OCCUPATIONAL CATEGORY (SASCO)	MALE				FEMALE				TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Legislators, senior officials and managers	6	4	4	15	3	4	4	17	57
Professionals	11	7	7	3	24	28	26	27	133
Technicians and associate professionals	16	19	9	2	76	47	30	14	213
Clerks	13	7	1	0	35	12	5	2	75
Service and sales workers	0	0	0	0	0	0	0	0	0
Skilled agriculture and fishery workers	0	0	0	0	0	0	0	0	0
Craft and related trades workers	0	0	0	0	0	0	0	0	0
Plant and machine operators and assemblers	0	0	0	0	0	0	0	0	0
Elementary occupations	15	5	0	1	7	6	0	0	34
Total	**61**	**42**	**21**	**21**	**145**	**97**	**65**	**60**	**512**

TABLE 12: TOTAL NUMBER OF EMPLOYEES (INCLUDING EMPLOYEES WITH DISABILITIES) IN EACH OF THE FOLLOWING OCCUPATIONAL BANDS, 31 MARCH 2016

OCCUPATIONAL BAND	MALE				FEMALE				TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Top management	1	0	0	0	0	0	0	2	3
Senior management	5	4	4	15	3	4	4	15	54
Professionally qualified and experienced specialists and mid-management	11	7	7	3	24	28	26	27	133
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents	16	19	9	2	76	47	30	14	213
Semi-skilled and discretionary decision making	13	7	1	0	35	12	5	2	75
Unskilled and defined decision making	15	5	0	1	7	6	0	0	34
Total	**61**	**42**	**21**	**21**	**145**	**97**	**65**	**60**	**512**

TABLE 13: RECRUITMENT, 1 APRIL 2015 TO 31 MARCH 2016

OCCUPATIONAL BAND	MALE				FEMALE				TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Top management	0	0	0	0	0	0	0	0	0
Senior management	0	0	1	1	0	0	0	0	2
Professionally qualified and experienced specialists and mid-management	1	0	0	0	3	3	3	3	13
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents	5	O	0	1	17	4	1	2	30
Semi-skilled and discretionary decision making	3	0	0	0	12	5	0	0	20
Unskilled and defined decision making	0	0	0	0	0	0	0	0	0
Total	**9**	**0**	**1**	**2**	**32**	**12**	**4**	**5**	**65**

TABLE 14: PROMOTIONS, 1 APRIL 2015 TO 31 MARCH 2016

OCCUPATIONAL BAND	MALE				FEMALE				TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Lower skilled (Levels 1–2)	0	0	0	0	0	0	0	0	0
Skilled (Levels 3–5)	1				1				2
Highly skilled production (Levels 6–8)	1	2	3		10	7	3	2	28
Highly skilled supervision (Levels 9–12)	4	2		1	6	3	1	4	21
Senior management						1	1	1	3
Total	**6**	**4**	**3**	**1**	**17**	**11**	**5**	**7**	**54**

TABLE 15: TERMINATIONS, 1 APRIL 2015 TO 31 MARCH 2016

OCCUPATIONAL BAND	MALE				FEMALE				TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Top management	0	0	0	0	0	0	0	0	0
Senior management	1	0	0	1	1	0	2	1	6
Professionally qualified and experienced specialists and mid-management	2	1	0	2	5	0	12	5	27
Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents	5	0	3	1	30	8	14	4	65
Semi-skilled and discretionary decision making	10	0	0	0	15	4	3	0	32
Unskilled and defined decision making	7	1	4	0	0	0	0	0	12
Total	**25**	**2**	**7**	**4**	**51**	**12**	**31**	**10**	**142**

TABLE 16: DISCIPLINARY ACTION, 1 APRIL 2015 TO 31 MARCH 2016

	MALE				FEMALE				TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Disciplinary action	0	0	0	0	0	0	0	1	1

TABLE 17: SKILLS DEVELOPMENT, 1 APRIL 2015 TO 31 MARCH 2016

OCCUPATIONAL CATEGORY	MALE				FEMALE				TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	
Legislators, senior officials and managers	0	0	0	2	0	1	4		7
Professionals	2	0	3	5		2	13	3	28
Technicians and associate professionals	7	2	2	0	21	4	16	0	52
Clerks	6	1	1	0	7	5	4	0	24
Service and sales workers	0	0	0	0	0	0	0	0	0
Skilled agriculture and fishery workers	0	0	0	0	0	0	0	0	0
Craft and related trades workers	0	0	0	0	0	0	0	0	0
Plant and machine operators and assemblers	0	0	0	0	0	0	0	0	0
Elementary occupations	6	0	0	0	0	0	0	0	6
Total	**21**	**3**	**6**	**7**	**28**	**12**	**37**	**3**	**117**

PERFOMANCE REWARDS

To encourage good performance, the department has granted the following performance rewards during the year under review. The information is presented in terms of race, gender, and disability (Table 18) and salary bands (Table 19).

TABLE 18: PERFORMANCE REWARDS BY RACE, GENDER, AND DISABILITY, 1 APRIL 2015 TO 31 MARCH 2016

	BENEFICIARY PROFILE			COST	
	Number of beneficiaries	Total number of employees in group	% of total within group	Cost (R)	Average cost per employee (R)
African	N/A	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A	N/A
Female	N/A	N/A	N/A	N/A	N/A
Asian	N/A	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A	N/A
Female	N/A	N/A	N/A	N/A	N/A
Coloured	N/A	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A	N/A
Female	N/A	N/A	N/A	N/A	N/A
White	N/A	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A	N/A
Female	N/A	N/A	N/A	N/A	N/A
Employees with a disability	N/A	N/A	N/A	N/A	N/A
Total	N/A	N/A	N/A	N/A	N/A

TABLE 19: PERFORMANCE REWARDS BY SALARY BANDS FOR PERSONNEL BELOW SENIOR MANAGEMENT SERVICE, 1 APRIL 2015 TO 31 MARCH 2016

SALARY BAND	BENEFICIARY PROFILE			COST		
	Number of beneficiaries	Number of employees	% of total within salary bands	Total cost (R)	Average cost per employee (R)	Total cost as a % of the total personnel expenditure
Lower skilled (Levels 12)	N/A					
Skilled (Levels 35)	N/A					
Highly skilled production (Levels 68)	N/A					
Highly skilled supervision (Levels 912)	N/A					
Total	**N/A**					

TABLE 20: PERFORMANCE RELATED REWARDS (CASH BONUS), BY SALARY BAND, FOR SENIOR MANAGEMENT SERVICE

SALARY BAND	BENEFICIARY PROFILE			TOTAL COST (R)	AVERAGE COST PER EMPLOYEE (R)	TOTAL COST AS A % OF THE TOTAL PERSONNEL EXPENDITURE
	Number of beneficiaries	Number of employees	% of total within band			
Band A	N/A	N/A	N/A	N/A	N/A	N/A
Band B	N/A	N/A	N/A	N/A	N/A	N/A
Band C	N/A	N/A	N/A	N/A	N/A	N/A
Band D	N/A	N/A	N/A	N/A	N/A	N/A
Total	**N/A**	N/A	N/A	N/A	N/A	N/A

FOREIGN WORKERS

The tables below summarise the employment of foreign nationals in the department in terms of salary bands and by major occupation. The tables also summarise changes in the total number of foreign workers in each salary band and by each major occupation.

TABLE 21: FOREIGN WORKERS, 1 APRIL 2015 TO 31 MARCH 2016, BY SALARY BAND

SALARY BAND	1 APRIL 2015		31 MARCH 2016		CHANGE	
	Number	% of total	Number	% of total	Number	% change
Lower skilled (Levels 1–2)	0	0	0	0	0	0
Skilled (Levels 3–5)	0	0	0	0	0	0
Highly skilled production (Levels 6–8)	3	13	3	14	0	0
Highly skilled supervision (Levels 9–12)	15	65	14	67	-1	7
Senior management (Levels 13–16)	5	22	4	19	-1	25
Total	**23**	**100**	**21**	**100**	**-2**	**10**

TABLE 22: FOREIGN WORKERS, 1 APRIL 2015 TO 31 MARCH 2016, BY MAJOR OCCUPATION

MAJOR OCCUPATION	1 APRIL 2015		31 MARCH 2016		CHANGE	
	Number	% of total (foreigners)	Number	% of total (foreigners)	Number	% change
Unit Director	1	4.3	1	5	0	0
Scientist	1	4.3	1	5	0	0
Senior Scientist	8	35	6	29	2	33
Senior Statistician	1	4.3	1	5	0	0
Specialist Scientist	2	9	2	10	0	0
Specialist Statistician	1	4.3	2	10	1	50
Senior Specialist Scientist	1	4.3	1	5	0	0
Chief Specialist Scientist	2	9	1	5	-1	100
Chief Specialist Statistician	1	4.3	1	5	0	0
Chief Research Technologist	0	0	1	5	1	100
Project Leader	1	4.3	0	0	1	0
Project Coordinator	1	4.3	1	5	0	0
Division Manager	2	9	2	10	0	0
Research Manager	1	4.3	1	5	0	0
Total	**23**	**100**	**21**	**100**		

LEAVE UTILISATION, 1 JANUARY 2015 TO 31 DECEMBER 2015

The Public Service Commission identified the need for careful monitoring of sick leave within the public service. The following tables provide an indication of the use of sick leave (Table 23) and disability leave (Table 24). In both cases, the estimated cost of the leave is also provided.

TABLE 23: SICK LEAVE, 1 JANUARY 2015 TO 31 DECEMBER 2015

SALARY BAND	TOTAL DAYS	% DAYS WITH MEDICAL CERTIFICATION	NUMBER OF EMPLOYEES USING SICK LEAVE	% OF TOTAL EMPLOYEES USING SICK LEAVE	AVERAGE DAYS PER EMPLOYEE	ESTIMATED COST (R'000)
Lower skilled (Levels 1–2)	151		19	55.9	8	75 247.47
Skilled (Levels 3–5)	420		60	80	7	246 379.76
Highly skilled production (Levels 6–8)	1 134		179	84	6	1 414 650.29
Highly skilled supervision (Levels 9–12)	375		81	61	4.5	909 466.22
Senior management	104		18	32	5.5	654 381.66
Total	**2 184**		**357**			**2 027 125.40**

TABLE 24: DISABILITY LEAVE (TEMPORARY AND PERMANENT), 1 JANUARY 2015 TO 31 DECEMBER 2015

SALARY BAND	TOTAL DAYS TAKEN	% DAYS WITH MEDICAL CERTIFICATION	NUMBER OF EMPLOYEES USING DISABILITY LEAVE	% OF TOTAL EMPLOYEES USING DISABILITY LEAVE	AVERAGE DAYS PER EMPLOYEE	ESTIMATED COST (R'000)
Lower skilled Levels 1–2)	18		1	2.9	18	8 493.91
Skilled (Levels 3–5)	30		1	1.3	30	17 744.88
Highly skilled production (Levels 6–8)	275		9	4.2	30.5	3 364 929.50
Highly skilled supervision (Levels 9–12)	57		2	1.5	28.5	264 729.50
Senior management	30		1	1.75	30	140 834.64
Total						**3 795 811.88**

Table 25 summarises the utilisation of annual leave. The wage agreement concluded with trade unions in the PSCBC in 2000 requires management of annual leave to prevent high levels of accrued leave being paid at the time of termination of service.

TABLE 25: ANNUAL LEAVE, 1 JANUARY 2015 TO 31 DECEMBER 2015

SALARY BAND	TOTAL DAYS TAKEN	AVERAGE PER EMPLOYEE
Lower skilled (Levels 1–2)	576	17
Skilled (Levels 3–5)	1 137.50	15
Highly skilled production (Levels 6–8)	3 941.50	18.5
Highly skilled supervision (Levels 9–12)	2 284	17
Senior management	1 206	21
Total	**9 145**	

TABLE 26: CAPPED LEAVE, 1 JANUARY 2015 TO 31 DECEMBER 2015

SALARY BAND	TOTAL DAYS OF CAPPED LEAVE TAKEN	AVERAGE NUMBER OF DAYS TAKEN PER EMPLOYEE	AVERAGE CAPPED LEAVE PER EMPLOYEE AS AT 31 DECEMBER 2015
Lower skilled (Levels 1–2)	9	9	6 675.42
Skilled (Levels 3–5)	37	9	17 194.70
Highly skilled production (Levels 6–8)	154	7	192 953.84
Highly skilled supervision (Levels 9–12)	150	9	335 951.12
Senior management	162	8.5	761 333.93
Total			**1 314 089.01**

The following table summarises payments made to employees as a result of leave that was not taken.

TABLE 27: LEAVE PAYOUTS, 1 APRIL 2015 TO 31 MARCH 2016

REASON	TOTAL AMOUNT (R'000)	NUMBER OF EMPLOYEES	AVERAGE PAYMENT PER EMPLOYEE
Terminations			
April	60 753.12	4	15 188.28
May	280 526.38	11	25 502.40
June	92 990.57	5	18 598.15
July	58 948.75	3	19 649.58
August	102 635.22	7	14 662.17
September	111 695.35	7	15 956.48
October	359 591.31	16	22 474.46
November	179 209.50	9	19 912.17
December	163 571.20	9	18 174.58
January	134 812.55	8	16 851.57
February	63 565.24	4	15 891.31
march	132 412.04	7	18916.00
Total			1 695 174.64

HIV AND AIDS & HEALTH PROMOTION PROGRAMMES

TABLE 28: STEPS TAKEN TO REDUCE THE RISK OF OCCUPATIONAL EXPOSURE

UNITS/CATEGORIES OF EMPLOYEES IDENTIFIED TO BE AT HIGH RISK OF CONTRACTING HIV & RELATED DISEASES	KEY STEPS
Not Applicable	

TABLE 29: DETAILS OF HEALTH PROMOTION AND HIV AND AIDS PROGRAMMES

QUESTION	YES	NO	DETAILS, IF YES
1. Has the department designated a member of the SMS to implement the provisions contained in Part VI E of Chapter 1 of the Public Service Regulations, 2001? If so, provide her/his name and position.		x	
2. Does the department have a dedicated unit or has it designated specific staff members to promote the health and well-being of your employees? If so, indicate the number of employees who are involved in this task and the annual budget that is available for this purpose.	x		A formal employee wellness programme, administered by an external service provider, in collaboration with HR. Budget R600 000
3. Has the department introduced an Employee Assistance or Health Promotion Programme for your employees? If so, indicate the key elements/services of this Programme.			• Employee Assistance Programme [EAP] , incl. psychological Issues, life management and work related Issues, managerial consultancy & referral issues • Health and awareness programme HIV and Wellness interventions, incl. on site visits, VCT, risk assessments • Wellness events and staff orientation • HIV and chronic conditions case management • Incapacity, ill-health and absenteeism management
4. Has the department established (a) committee(s) as contemplated in Part VI E.5 (e) of Chapter 1 of the Public Service Regulations, 2001? If so, please provide the names of the members of the committee and the stakeholder(s) that they represent.		x	
5. Has the department reviewed its employment policies and practices to ensure that these do not unfairly discriminate against employees on the basis of their HIV status? If so, list the employment policies/practices so reviewed.	x		Recruitment and remuneration policies. Rest of policies are subject to legislative requirements, e.g. LRA, EE Act
6. Has the department introduced measures to protect HIV-positive employees or those perceived to be HIV-positive from discrimination? If so, list the key elements of these measures.		x	No special reference, as it is part of SAMRC's general code of conduct to honour the stipulations encompassed in Constitution and other legislation
7. Does the department encourage its employees to undergo Voluntary Counselling and Testing? If so, list the results that you have you achieved.	x		Approx. 50% of staff knows their status through wellness and other events. 8 employees registered on the wellness programme HIV programme
8. Has the department developed measures/indicators to monitor & evaluate the impact of its health promotion programme? If so, list these measures/indicators.	x		Monthly take up, counselling sessions, calls received, VCTs, CDM. Quarterly reports submitted by the Wellness consultants. Utilisation of services increased by 15% on individual and 42% increase on organisational levels.

LABOUR RELATIONS

The following collective agreements were entered into with trade unions within the department.

TABLE 30: COLLECTIVE AGREEMENTS, 1 APRIL 2015 TO 31 MARCH 2016

SUBJECT MATTER	DATE
Salary adjustments	24 March 2016

TABLE 31: MISCONDUCT AND DISCIPLINARY HEARINGS FINALISED, 1 APRIL 2015 TO 31 MARCH 2016

OUTCOME OF DISCIPLINARY HEARINGS	NUMBER	% OF TOTAL
Correctional counselling		
Verbal warning		
Written warning		
Final written warning		
Suspended without pay		
Fine		
Demotion		
Dismissal	1	0.2
Not guilty		
Case withdrawn		
Total	**1**	**0.2**

TABLE 32: TYPES OF MISCONDUCT ADDRESSED AT DISCIPLINARY HEARINGS

TYPE OF MISCONDUCT	NUMBER	% OF TOTAL
Unauthorised absence, dishonesty	1	0.2%
Total	N/A	N/A

TABLE 33: GRIEVANCES LODGED, 1 APRIL 2015 TO 31 MARCH 2016

	NUMBER	% OF TOTAL
Number of grievances resolved		
Number of grievances not resolved		
Total number of grievances lodged	**0**	**0**

TABLE 34: DISPUTES LODGED WITH COUNCILS, 1 APRIL 2015 TO 31 MARCH 2016

	NUMBER	% OF TOTAL
Number of disputes upheld	N/A	
Number of disputes dismissed	N/A	
Total number of disputes lodged	N/A	

TABLE 35: STRIKE ACTIONS, 1 APRIL 2015 TO 31 MARCH 2016

Total number of person working days lost	N/A
Total cost (R) of working days lost	N/A
Amount (R) recovered as a result of no work no pay	N/A

TABLE 36: PRECAUTIONARY SUSPENSIONS, 1 APRIL 2015 TO 31 MARCH 2016

Number of people suspended	1
Number of people whose suspension exceeded 30 days	1
Average number of days suspended	32
Cost (R) of suspensions	105 830

SKILLS DEVELOPMENT

This section highlights the efforts of the department with regard to skills development.

TABLE 37: TRAINING NEEDS IDENTIFIED, 1 APRIL 2015 TO 31 MARCH 2016

OCCUPATIONAL CATEGORY	GENDER	NUMBER OF EMPLOYEES AS AT 1 APRIL 2016	TRAINING NEEDS IDENTIFIED AT START OF REPORTING PERIOD			
			Learnerships	Skills programmes & other short courses	Other forms of training	Total
Legislators, senior officials and managers	Female	28	N/A	8	23	31
	Male	29	N/A	N/A	1	1
Professionals	Female	105	N/A	85	119	204
	Male	28	N/A	5	15	20
Technicians and associate professionals	Female	167	N/A	32	441	473
	Male	46	N/A	6	96	102
Clerks	Female	54	N/A	5	214	219
	Male	21	N/A	N/A	71	71
Elementary occupations	Female	13	N/A	N/A	4	
	Male	21	N/A	N/A	33	33
Total		**512**	N/A	**141**	**1017**	**1158**

TABLE 38: TRAINING PROVIDED, 1 APRIL 2015 TO 31 MARCH 2016

OCCUPATIONAL CATEGORY	GENDER	NUMBER OF EMPLOYEES AS AT 1 APRIL 2016	TRAINING PROVIDED WITHIN THE REPORTING PERIOD			
			Learnerships	Skills programmes & other short courses	Other forms of training	Total
Legislators, senior officials and managers	Female	28	N/A	9	23	32
	Male	29	N/A	1	N/A	1
Professionals	Female	105	N/A	9	146	155
	Male	28	N/A	2	8	10
Technicians and associate professionals	Female	167	N/A	12	360	372
	Male	46	N/A	10	77	87
Clerks	Female	54	N/A	7	245	252
	Male	21	N/A	N/A	80	80
Elementary occupations	Female	13	N/A	N/A	28	28
	Male	21	N/A	N/A	0	0
Total		**512**	N/A	**50**	**967**	**1017**

INJURY ON DUTY

The following tables provide basic information on injury on duty

TABLE 39: INJURY ON DUTY, 1 APRIL 2015 TO 31 MARCH 2016

NATURE OF INJURY ON DUTY	NUMBER	% OF TOTAL
Required basic medical attention only	5	62.5%
Temporary total disablement	3	27.5%
Permanent disablement	0	0
Fatal	0	0
Total	N/A	N/A

PART E
FINANCIAL INFORMATION

The reports and statements set out below comprise the annual financial statements presented to the Accounting Authority:

REPORT OF THE CHIEF EXECUTIVE OFFICER/PRESIDENT

GENERAL FINANCIAL REVIEW

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

A strong financial performance for the year resulted in revenue showing a substantial increase of 27.3% to R849 722 (R667 406). This consisted of an increase in government grants of 39.8% to R547 274 (R391 518) and an increase in contract income of 9.6% to R302 448 (R275 888).

This contributed to an operating surplus of R37 352 for the year compared to an operating deficit of R22 167 in 2014/15. An increase in investment income of 35.6% to R25 948 (R19 138) due to an increase in the average balance of investments and interest rates during the year under review resulted in a net surplus for the year of R60 739 compared to a deficit R3 749 in 2014/15.

The final surplus for the year of R60 739 compares to an approved budget deficit of R30 000. This is due mainly as a result of delayed payments on grants as well the finalisation of collaborative contracts with international funders taking longer than anticipated.

The organisation remains financially strong with accumulated reserves of R303 958 (R243 218).

Total assets have increased by 32.9% to R628 635 (R472 849) due mainly to an increase in cash and cash equivalents of 43.4% to R449 955 (R313 790). The increase in total assets has been offset by an increase in payables from exchange transactions of 57.5% to R102 237 (R64 929) resulting from an increase in grant accruals.

In addition, deferred income increased by 66.9% to R206 001 (R123 425) reflecting the increase in research funding received from local and international funders.

Provisions include an amount of R3 523 raised in respect of a performance bonus for the 2015/16 year.

The organisation generated a positive operating cash flow of R179 624 compared to a negative cash flow of R7 329 in the prior period. The main contributor to this was the significant increase in cash receipts from grants and other income, which increased by 37.5% to R946 566 (R688 441) Net cash flows from investing activities were negative due mainly to capital expenditure of R41 546 (R15 595). The net impact of the above is an increase of R136 164 in cash and cash equivalents to R449 955 (R313 790).

SPENDING TRENDS

Operating expenses also showed a significant increase of 18.0% to R823 071 (R697 751) largely in line with the increase in income.

Collaborative research costs increased by 49.1% to R389 747 (R261 346) reflecting the continued growth in high-impact grant awards.

This was to some extent offset by a 9.5% decrease in travel costs to R28 848 (R31 870) as well as a 32.6% decrease in consulting fees to R7 966 (R11 826).

Employee-related costs have increased by 2.1% to R283 153 (R277 231). The increase in basic salary costs of 9.3% to R161 023 (R147 349) has to a large extent been offset by a reduction in temporary staff costs of 26% to R10 858 (R14 675) due to the reduction in temporary staff employed. Employee-related costs include a bonus provision of R3 573.

Continued tight expense control and efficiency savings continue to increase the proportion of total spending allocated to research and have reduced the total corporate and support costs as a percentage of total spending to 19% for the year compared to the Annual Performance Plan target of 25%.

REQUESTS FOR ROLL OVER OF FUNDS

Accumulated reserves at 31 March 2016 amount to R303 958 (R243 218). The necessary approvals have been obtained 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 existing Materiality Framework was approved by the Minister. Irregular expenditure for the year increased to R1 473 from R730 in 2014/15.

AUDIT REPORT MATTERS

There were no matters of significance in the audit report requiring further clarification.

Events after the reporting date:
There were no significant events occurring after balance sheet date

ECONOMIC VIABILITY

An increase in funding allocations of 5.4 % to R657 590 for 2016/17 has been approved by government through the MTEF process. This, together with accumulated reserves of R303 958 and significant increases anticipated in grant income, will ensure that the SAMRC will continue to operate as a going concern.

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE SOUTH AFRICAN MEDICAL RESEARCH COUNCIL

REPORT ON THE FINANCIAL STATEMENTS

INTRODUCTION

1. I have I have audited separate financial statements of the South African Medical Research Council set out on pages 125 to 191, which comprise the statement of financial position as at 31 March 2016, the statement of financial performance, statement of changes in net assets, statement of cash flows and the statement of comparison of budget and actual amounts for the year then ended, as well as the notes, comprising a summary of significant accounting policies and other explanatory information.

ACCOUNTING AUTHORITY'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

2. The board, which constitutes the accounting authority, is responsible for the preparation and fair presentation of these financial statements in accordance with the South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) and the requirements of the Public Finance ManagementAct,1999 (Act No.1of 1999) (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.

AUDITOR-GENERAL'S RESPONSIBILITY

3. My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with the International Standards on Auditing. Those standards require that I comply with ethical requirements, and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

4. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

OPINION

6. 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 2016 and its financial performance and cash flows for the year then ended, in accordance with the SA Standards of GRAP and the requirements of the PFMA.

EMPHASIS OF MATTER

7. I draw attention to the matter below. My opinion is not modified in respect of this matter

RESTATEMENT OF CORRESPONDING FIGURES

8. As disclosed in note 35 to the financial statements, the corresponding figures for 31 March 2015 have been restated as a result of errors discovered during the 2015-16 financial year in the financial statements of the South African Medical Research Council at, and for the year ended, 31 March 2015.

ADDITIONAL MATTER

9. I draw attention to the matter below. My opinion is not modified in respect of this matter.

UNAUDITED SUPPLEMENTARY INFORMATION

10. The supplementary information set out on page 192 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 thereon.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

11. In accordance with the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) and the general notice issued in terms thereof, I have a responsibility to report findings on the reported performance information against predetermined objectives of selected objectives presented in the annual performance report, compliance with legislation and internal control. The objective of my tests was to raise reportable findings as described under each subheading but not to gather evidence to express assurance on these matters. Accordingly, I do not express an opinion or conclusion on these matters.

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE SOUTH AFRICAN MEDICAL RESEARCH COUNCIL (CONTINUED)

PREDETERMINED OBJECTIVES

12. I performed procedures to obtain evidence about the usefulness and reliability of the reported performance information for the following selected objectives presented in the annual performance report of the entity for the year ended 31 March 2016:
    - Strategic objective 2.1: to produce and disseminate new scientific findings and knowledge on health on pages 66 to 67
    - Strategic objective 2.2: to promote scientific excellence and the reputation of South African health research on pages 66 to 67
    - Strategic objective 2.3: to provide leadership in the generation of new knowledge in health on pages 66 to 67
    - Strategic objective 2.4: to facilitate the translation of SAMRC research findings into health policies and practices on pages 66 to 67

13. I evaluated the usefulness of the reported performance information to determine whether it was presented in accordance with the National Treasury's annual reporting principles and whether the reported performance was consistent with the planned objectives. I further performed tests to determine whether indicators and targets were well defined, verifiable, specific, measurable, time bound and relevant, as required by the National Treasury's Framework for Managing Programme Performance Information.

14. I assessed the reliability of the reported performance information to determine whether it was valid, accurate and complete.

15. I did not identify any material findings on the usefulness and reliability of the reported performance information for the following objectives:
    - Strategic objective 2.1: to produce and disseminate new scientific findings and knowledge on health
    - Strategic objective 2.2: to promote scientific excellence and the reputation of South African health research
    - Strategic objective 2.3: to provide leadership in the generation of new knowledge in health
    - Strategic objective 2.4: to facilitate the translation of SAMRC research findings into health policies and practices.

ADDITIONAL MATTERS

16. Although I identified no material findings on the usefulness and reliability of the reported performance information for the selected objectives, I draw attention to the following matters:

ACHIEVEMENT OF PLANNED TARGETS

17. Refer to the annual performance report on pages 66 to 69 for information on the achievement of the planned targets for the year.

ADJUSTMENT OF MATERIAL MISSTATEMENTS

18. I identified material misstatements in the annual performance report submitted for auditing on the reported performance information for strategic objective 2.1: to produce and disseminate new scientific findings and knowledge on health. As management subsequently corrected the misstatements, I did not raise any material findings on the usefulness and reliability of the reported performance information.

UNAUDITED SUPPLEMENTARY INFORMATION

19. The supplementary information set out on pages 21 to 64 does not form part of the annual performance report and is presented as additional information. I have not audited these schedules and, accordingly, I do not report on them.

COMPLIANCE WITH LEGISLATION

20. I performed procedures to obtain evidence that the entity had complied with applicable legislation regarding financial matters, financial management and other related matters. I did not identify any instances of material non-compliance with specific matters in key legislation, as set out in the general notice issued in terms of the PAA.

INTERNAL CONTROL

21. I considered internal control relevant to my audit of the financial statements, annual performance report and compliance with legislation. I did not identify any significant deficiencies in internal control.

Auditor-General

Cape Town
29 July 2016

AUDITOR-GENERAL SOUTH AFRICA
Auditing to build public confidence

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 member 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 annual financial statements and was 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.

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 deficit 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 or deficit.

The Accounting Authority has reviewed the entity's cash flow forecast for the year to 31 March 2017 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, it is supported by the entity's external auditors.

The external auditors are responsible for independently auditing and expressing an opinion 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 121 to 122.

The annual financial statements set out on pages 125 to 191, which have been prepared on the going concern basis, were approved by the Accounting Authority on 28 July 2016 and were signed on its behalf by:

PROFESSOR M SATHEKGE
Chairperson of the Board

AUDIT COMMITTEE REPORT

We are pleased to present our report for the financial year ended March 31, 2016.

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 4 meetings were held.

NAME OF MEMBER	NUMBER OF MEETINGS ATTENDED
Doctor P Hanekom (Chairperson)	4
Advocate J Ralefatane	3
Professor Y Osman	4
Professor K Mfenyana	2
Doctor F Conradie	1

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 III 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 Accounting Authority 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 entity's compliance with legal and regulatory provisions.

The audit committee concurs with and accepts the Auditor-General of South Africa's report on the annual financial statements, and are of the opinion that the audited annual financial statements should be accepted and read together with the report of the Auditor-General of South Africa.

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.

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

The IT infrastructure as well as Oracle JDE financial system was upgraded during the year under review.

Chairperson of the Audit Committee
28 July 2016

STATEMENT OF FINANCIAL POSITION

	NOTE(S)	2016 R	2015 RESTATED* R
ASSETS			
CURRENT ASSETS			
Financial assets at fair value/ amortised cost	3	6,370,811	6,334,078
Receivables from exchange transactions	4	13,223,965	26,230,026
VAT receivable	5	12,494,929	3,860,873
Prepayments	6	2,600,610	1,794,906
Cash and cash equivalents	7	449,954,519	313,790,334
		484,644,834	**352,010,217**
NON-CURRENT ASSETS			
Biological assets that form part of an agricultural activity	8	1,137,529	904,792
Property, plant and equipment	9	135,848,670	112,013,977
Intangible assets	10	7,004,253	7,684,548
Investments in controlled entities	11	2	2
Financial assets at fair value/ amortised cost	3	-	235,307
		143,990,454	**120,838,626**
TOTAL ASSETS		**628,635,288**	**472,848,843**
LIABILITIES			
CURRENT LIABILITIES			
Payables from exchange transactions	12	102,237,232	64,928,539
Provisions	13	7,204,989	25,933,160
Deferred income	14	206,000,975	123,424,757
		315,443,196	**214,286,456**
NON-CURRENT LIABILITIES			
Employee benefit obligation	15	5,784,000	12,184,000
Earmarked funds	16	3,450,504	3,160,138
		9,234,504	**15,344,138**
TOTAL LIABILITIES		**324,677,700**	**229,630,594**
NET ASSETS		**303,957,588**	**243,218,249**
Accumulated surplus	17	303,957,588	243,218,249

The prior year figures have been restated.

STATEMENT OF FINANCIAL PERFORMANCE

		2016	2015 RESTATED*
	NOTE(S)	R	R
Revenue	18	849,722,349	667,406,256
Other income	19	10,700,648	8,177,642
Operating expenses		(823,070,915)	(697,751,306)
OPERATING SURPLUS	28	**37,352,082**	**(22,167,408)**
Investment income	20	25,947,888	19,137,560
Fair value adjustments	26	(1,266,456)	651,514
Finance costs	23	(1,294,175)	(1,370,197)
SURPLUS (DEFICIT) FOR THE YEAR		**60,739,339**	**(3,748,531)**

STATEMENT OF CHANGES IN NET ASSETS

	ACCUMU-LATED SURPLUS	TOTAL NET ASSETS
	R	R
Opening balance as previously reported	245,891,698	245,891,698
ADJUSTMENTS		
Prior year adjustments	1,075,082	1,075,082
BALANCE AT APRIL 1, 2014 AS RESTATED*	**246,966,780**	**246,966,780**
Changes in net assets	(3,748,531)	(3,748,531)
Deficit for the 12 months		
Total changes	(3,748,531)	(3,748,531)
RESTATED* BALANCE AT APRIL 1, 2015	**243,218,249**	**243,218,249**
Changes in net assets		
Surplus for the year	60,739,339	60,739,339
Total changes	60,739,339	60,739,339
BALANCE AT MARCH 31, 2016	**303,957,588**	**303,957,588**

Note 35 Relates to Prior year errors	35

** The accumulated surplus balance as at 1 April 2014 has been restated to take into account the retrospective effect of the depreciation error incorrectly computed on land and the inclusion of animals used for research purposes.*

CASH FLOW STATEMENT

	NOTE(S)	2016 R	2015 RESTATED* R
CASH FLOWS FROM OPERATING ACTIVITIES			
RECEIPTS			
Interest income		25,845,197	19,045,116
Dividends received		102,691	92,444
Cash receipts from grants and other income		946,565,517	688,441,051
		972,513,405	**707,578,611**
PAYMENTS			
Suppliers		(791,594,781)	(713,537,077)
Finance costs		(1,294,175)	(1,370,197)
		(792,888,956)	**(714,907,274)**
NET CASH FLOWS FROM OPERATING ACTIVITIES	29	**179,624,449**	**(7,328,663)**
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment	9	(41,545,636)	(15,595,298)
Proceeds from sale of property, plant and equipment	9	143,551	459,592
Purchase of other intangible assets	10	(1,206,176)	(1,070,908)
Movement of financial assets		-	(34,429)
Purchase of biological assets that form part of an agricultural activity	8	(1,412,135)	-
Proceeds from sale of biological assets that form part of an agricultural activity	8	34,459	182,100
Loans and receivables repaid	3	235,307	
NET CASH FLOWS FROM INVESTING ACTIVITIES		**(43,750,630)**	**(16,058,943)**
CASH FLOWS FROM FINANCING ACTIVITIES			
Movement in earmarked funds	16	290,366	2,051,310
NET (DECREASE) / INCREASE IN CASH AND CASH EQUIVALENTS		**136,164,185**	**(21,336,296)**
Cash and cash equivalents at the beginning of the year		313,790,334	335,126,630
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	7	**449,954,519**	**313,790,334**

The accounting policies on pages 131 to 145 and the notes on pages 146 to 192 form an integral part of the annual financial statements. An amount of R206,000,975 included in cash and cash equivalents is due to cash received from funders on projects not yet commenced.

STATEMENT OF COMPARISON OF BUDGET AND ACTUAL AMOUNTS

	APPROVED BUDGET	ADJUSTMENT	FINAL BUDGET	ACTUAL AMOUNTS ON COMPARIBLE BASIS	DIFFERENCE BETWEEN FINAL BUDGET AND ACTUAL	REFERENCE
	R	R	R	R	R	
BUDGET ON ACCRUAL BASIS						
STATEMENT OF FINANCIAL PERFORMANCE						
REVENUE						
REVENUE FROM EXCHANGE TRANSACTIONS						
Income from contracts, grants and services rendered	349,480,000	(42,642,065)	**306,837,935**	302,448,665	**(4,389,270)**	42
Rental income	4,741,256	(641,256)	**4,100,000**	4,316,568	**216,568**	
Other income	10,200,000	(5,200,000)	**5,000,000**	5,651,108	**651,108**	
Interest received - investment	25,059,060	(1,000,000)	**24,059,060**	25,845,197	**1,786,137**	42
Dividends received	-	-	**-**	102,691	**102,691**	
TOTAL REVENUE FROM EXCHANGE TRANSACTIONS	**389,480,316**	**(49,483,321)**	**339,996,995**	**338,364,229**	**(1,632,766)**	
REVENUE FROM NON-EXCHANGE TRANSACTIONS						
Transfer revenue						
Government grants & subsidies	547,273,684	-	**547,273,684**	547,273,684	**-**	
TOTAL REVENUE	**936,754,000**	**(49,483,321)**	**887,270,679**	**885,637,913**	**(1,632,766)**	

STATEMENT OF COMPARISON OF BUDGET AND ACTUAL AMOUNTS (CONTINUED)

	APPROVED BUDGET	ADJUSTMENT	FINAL BUDGET	ACTUAL AMOUNTS ON COMPARIBLE BASIS	DIFFERENCE BETWEEN FINAL BUDGET AND ACTUAL	REFERENCE
	R	R	R	R	R	
EXPENDITURE						
Personnel	(308,982,402)	(10,357,606)	**(319,340,008)**	(283,153,337)	**36,186,671**	42
Infra-structural, communication & statutory costs	(37,911,976)	1,151,188	**(36,760,788)**	(27,359,228)	**9,401,560**	42
Depreciation and amortisation	(20,400,000)	-	**(20,400,000)**	(18,627,305)	**1,772,695**	42
Impairment loss/ Reversal of impairments	-	-	**-**	1,480,701	**1,480,701**	42
Finance costs	-	-	**-**	(1,294,175)	**(1,294,175)**	42
Lease rentals	(5,376,473)	482,085	**(4,894,388)**	(4,800,490)	**93,898**	
Bad debts written off	(1,000,000)	-	**(1,000,000)**	-	**1,000,000**	42
Repairs and maintenance	(20,500,001)	5,500,001	**(15,000,000)**	(14,304,129)	**695,871**	
Travel, subsistence and vehicle fleet costs	(38,150,103)	10,150,103	**(28,000,000)**	(28,847,711)	**(847,711)**	
Collaborative research	(453,788,199)	49,429,897	**(404,358,302)**	(389,747,411)	**14,610,891**	42
External research support, consulting and internal audit	(13,550,000)	5,550,000	**(8,000,000)**	(7,966,359)	**33,641**	
Printing and stationery	(12,500,000)	7,500,000	**(5,000,000)**	(4,060,687)	**939,313**	
Debt impairment reversals	-	-	**-**	1,294,477	**1,294,477**	42
Information technology	(17,354,846)	3,286,397	**(14,068,449)**	(14,749,751)	**(681,302)**	
Laboratory operating expenses	(22,000,000)	10,500,000	**(11,500,000)**	(12,539,040)	**(1,039,040)**	42
Other expenses	(12,500,000)	2,000,000	**(10,500,000)**	(14,814,707)	**(4,314,707)**	42
Audit fees	(2,740,000)	-	**(2,740,000)**	(2,561,206)	**178,794**	
TOTAL EXPENDITURE	**(966,754,000)**	**85,192,065**	**(881,561,935)**	**(822,050,358)**	**59,511,577**	
OPERATING SURPLUS	**(30,000,000)**	**35,708,744**	**5,708,744**	**63,587,555**	**57,878,811**	
Loss on disposal of assets and liabilities	-	-	**-**	(2,314,732)	**(2,314,732)**	
Gain on foreign exchange	-	-	**-**	732,972	**732,972**	
Fair value adjustments	-	-	**-**	(1,266,456)	**(1,266,456)**	42
	-	**-**	**-**	**(2,848,216)**	**(2,848,216)**	
SURPLUS BEFORE TAXATION	**(30,000,000)**	**35,708,744**	**5,708,744**	**60,739,339**	**55,030,595**	
ACTUAL AMOUNT ON COMPARABLE BASIS AS PRESENTED IN THE BUDGET AND ACTUAL COMPARATIVE STATEMENT	**(30,000,000)**	**35,708,744**	**5,708,744**	**60,739,339**	**55,030,595**	

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 financial statements are rounded to the nearest Rand.

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 except for property, plant and equipment which now includes biological assets and discloses land separately.

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 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:

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 historical loss ratios, adjusted for national and industry-specific economic conditions and other indicators present at the reporting date that correlate with defaults on the portfolio. These annual loss ratios are applied to loan balances in the portfolio and scaled to the estimated loss emergence period.

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 long-term debt. Other techniques, such as estimated discounted cash flows, are used to determine fair value for the remaining financial instruments. The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows. The fair value of forward foreign exchange contracts is determined using quoted forward exchange rates at the end of the reporting period.

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.

ACCOUNTING POLICIES

1.2 SIGNIFICANT JUDGEMENTS AND SOURCES OF ESTIMATION UNCERTAINTY (CONTINUED)

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 13 - 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.

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 15.

1.3 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.

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 of 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.

1.4 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are tangible non-current assets (including infrastructure assets and biological assets used for research) 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 or fair value at implementation of GRAP 17.

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 Council and its costs can be measured reliably. 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 date of acquisition or as at the implementation of GRAP 17.

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.

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.

ACCOUNTING POLICIES

1.4 PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

The useful lives of items of property, plant and equipment have been assessed as follows:

ITEM	DEPRECIATION METHOD	AVERAGE USEFUL LIFE
Land	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
Air conditioners	Straight line	10 - 15 years
Irrigation equipment	Straight line	10 - 15 years
Signage	Straight line	10 - 15 years
Usufruct buildings	Straight line	over life of asset
Prefabricated buildings	Straight line	20 -30 years
Other property, plant and equipment -Biological assets - Vervet monkeys	Straight line	30 years
Laboratory equipment	Straight line	5 -30 years

The residual value, and the useful life and depreciation method of each asset are 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 determine 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.

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.

1.5 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.

ACCOUNTING POLICIES

1.5 INTANGIBLE ASSETS (CONTINUED)

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.

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	USEFUL LIFE
Computer software	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 an 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).

1.6 INVESTMENTS IN CONTROLLED ENTITIES

Investments in controlled entities are carried at cost less any accumulated impairment.

1.7 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 points paid or received between parties to the contract that are an integral part of the effective interest rate (see the Standard of GRAP on Revenue from Exchange Transactions), 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.

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.

ACCOUNTING POLICIES

1.7 FINANCIAL INSTRUMENTS (CONTINUED)

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;
  - 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 OF FINANCIAL INSTRUMENT	CATEGORY
Trade debtors	Financial assets measured at amortised cost
Shares	Held for trading measured at fair value
Unit trusts	Held for trading measured at fair value
Cash and cash equivalents	Financial assets measured at amortised cost
Loans and receivables	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.

ACCOUNTING POLICIES

1.7 FINANCIAL INSTRUMENTS (CONTINUED)

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.

IMPAIRMENT AND UNCOLLECTIBILITY OF FINANCIAL ASSETS

The entity assess 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 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.

Losses and gains relating to a financial instrument or a component that is a financial liability is recognised as revenue in surplus or deficit.

1.8 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 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.

1.9 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-orientated 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.

ACCOUNTING POLICIES

1.9 IMPAIRMENT OF NON-CASH-GENERATING ASSETS (CONTINUED)

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.
(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 entity to distinguish non-cash-generating assets from cash-generating assets are as follow:

Assets use 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 a non-cash-generating assets is determined using the following approach:

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 assess 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.

ACCOUNTING POLICIES

1.10 EMPLOYEE BENEFITS

Employee benefits are all forms of consideration given by SAMRC in exchange for service rendered by its employees. An annual valuation of the MRC Pension Fund and Post Retirement Medical Aid is performed.

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 recognise 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 recognise 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 measure 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 recognise 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.

When an employee has rendered service to the entity during a reporting period, the entity recognise 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 recognise 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 recognise 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

ACCOUNTING POLICIES

1.10 EMPLOYEE BENEFITS (CONTINUED)

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 recognise 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.

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 measure 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 determine 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

ACCOUNTING POLICIES

1.10 EMPLOYEE BENEFITS (CONTINUED)

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.

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 [OR 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.

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:

ACCOUNTING POLICIES

1.10 EMPLOYEE BENEFITS (CONTINUED)

- 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 failing 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 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 income in the period in which it occurs.

1.11 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 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.

A restructuring provision includes only the direct expenditures arising from the restructuring, which are those that are both:

- necessarily entailed by the restructuring; and
- not associated with the ongoing activities of the entity

No obligation arises as a consequence of the sale or transfer of an operation until the entity is committed to the sale or transfer, that is, there is a binding arrangement.

After their initial recognition contingent liabilities recognised in entity combinations that are recognised separately are subsequently measured at the higher of:

- the amount that would be recognised as a provision; and

ACCOUNTING POLICIES

1.11 PROVISIONS AND CONTINGENCIES (CONTINUED)

- the amount initially recognised less cumulative amortisation.

Contingent assets and contingent liabilities are not recognised. Contingencies are disclosed in note 32.

1.12 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 annual 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 or social security benefit commitments are excluded.

1.13 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 text books; 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.

INTEREST, ROYALTIES AND DIVIDENDS

Revenue arising from the use by others of entity assets yielding interest, royalties and dividends 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 method.

ACCOUNTING POLICIES

1.13 REVENUE FROM EXCHANGE TRANSACTIONS (CONTINUED)

Royalties are recognised as they are earned in accordance with the substance of the relevant agreements.

Dividends or their equivalents 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.

1.14 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.

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.

1.15 REVENUE RECOGNITION FOR EXCHANGE AND NON-EXCHANGE TRANSACTIONS

Revenue represents the parliamentary grant from government as well as the 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 expenses are recognised.

Revenue other than grants, donations, project revenue and council activities (Revenue from exchange transactions)

ACCOUNTING POLICIES

1.15 REVENUE RECOGNITION FOR EXCHANGE AND NON-EXCHANGE TRANSACTIONS (CONTINUED)

Revenue is recognised on the accrual basis. Revenue is recognised when significant risks and rewards of the ownership have been transferred.

RESEARCH REVENUE

Revenue is recognised only to the extent of research costs incurred and is probable that they 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.

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 to the extent that expenses are incurred and that conditions of the grant are met.

1.16 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.

1.17 TRANSLATION OF FOREIGN CURRENCIES

FOREIGN CURRENCY TRANSACTIONS

A foreign currency transaction is recorded, on initial recognition in Rands, 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.

1.18 VAT

The SAMRC accounts for vat on the invoice basis

1.19 COMPARATIVE FIGURES

Where necessary, comparative figures have been restated to conform to changes in presentation in the current year.

1.20 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.

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.

1.21 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.

ACCOUNTING POLICIES

1.21 IRREGULAR EXPENDITURE (CONTINUED)

National Treasury practice note no. 4 of 2008/2009 which was issued in terms of sections 76(1) to 76(4) of the PFMA requires the following (effective from 1 April 2008):

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 will be disclosed in the notes to the annual financial statements.

Irregular expenditure that was incurred and identified during the current financial year and for which condonement is being awaited at year end will be disclosed in the notes to the annual financial statements.

Where irregular expenditure was incurred in the previous financial year and is only condoned in the following financial year, the register and the disclosure note to the annual financial statements will be updated with the amount condoned.

Irregular expenditure that was incurred and identified during the current financial year and which was not condoned by the National Treasury or the relevant authority 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 relevant note to the financial statements.

1.22 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 4/1/2015 to 3/31/2016.

The budget for the economic entity includes all the entities approved budgets under its control.

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.

Comparative information is not required.

1.23 RELATED PARTIES

The entity operates in an economic 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 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 are considered to be those family members who may be expected to influence, or be influenced by, that management in their dealings with the entity.

Only transactions with related parties not at arm's length or not in the ordinary course of business are disclosed.

1.24 EARMARKED FUNDS

These funds represent monies that have been received for clearly defined purposes. The monies received have been allocated to a separate account. The monies are held separately from the cash balances of the SAMRC.

1.25 CONDITIONAL GRANTS AND RECEIPTS

Revenue received from conditional grants, donations and funding are recognised as revenue to the extent that the entity has complied with any of the criteria, conditions or obligations embodied in the agreement. Revenue relating to criteria, conditions or obligations that have not been met is shown in deferred income.

NOTES TO THE FINANCIAL STATEMENTS

2. NEW STANDARDS AND INTERPRETATIONS

2.1 STANDARDS AND INTERPRETATIONS ISSUED, BUT NOT YET EFFECTIVE

The entity has not applied the following standards and interpretations, which have been published and are mandatory for the entity's accounting periods beginning on or after April 1, 2016 or later periods:

STANDARD/ INTERPRETATION:	EFFECTIVE DATE: YEARS BEGINNING ON OR AFTER	EXPECTED IMPACT:
GRAP 20: Related parties	April 1, 2017	The adoption of this amendment 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 32: Service Concession Arrangements: Grantor	April 1, 2016	None
GRAP 108: Statutory Receivables	April 1, 2016	None
GRAP 16 (as amended 2015): Investment Property	April 1, 2016	None
GRAP 17 (as amended 2015): Property, Plant and Equipment	April 1, 2016	The impact of the amendment is not material.
GRAP 109: Accounting by Principals and Agents	April 1, 2017	None
GRAP 21 (as amended 2015): Impairment of non-cash-generating assets	April 1, 2017	The impact of the amendment is not material.
GRAP 26 (as amended 2015): Impairment of cash-generating assets	April 1, 2017	None
Directive 12: The Selection of an Appropriate Reporting Framework by Public Entities	April 1, 2018	Not applicable

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
3. FINANCIAL ASSETS AT FAIR VALUE/ AMORTISED COST		
DESIGNATED AT FAIR VALUE		
Listed shares	1,021,739	1,144,749
Sanlam demutualisation shares - No. of shares 12715 (2015 - 12715) and Old Mutual demutualisation shares No. shares 3682 (2015 - 3682)		
Unit trusts	5,349,072	5,189,329
SIM General Equity Fund R - 15688,93 units (2015 - 15403,51 units) and SIM Balanced Fund R - 26382,96 (2015 - 25601,29)		
	6,370,811	**6,334,078**
AT AMORTISED COST		
Tertiary Education and Research Network of SA (TENET)	-	235,307
The loan is unsecured and interest free. The loan is repaid in monthly instalments by debiting the CIR Bid account, amount due by the SAMRC to TENET, in respect of the INT-SEA service		
TOTAL OTHER FINANCIAL ASSETS	**6,370,811**	**6,569,385**
NON-CURRENT ASSETS		
Loans and receivables at amortised cost	-	235,307
CURRENT ASSETS		
Designated at fair value	6,370,811	6,334,078

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
3. FINANCIAL ASSETS AT FAIR VALUE/ AMORTISED COST (CONTINUED)		
FINANCIAL ASSETS AT FAIR VALUE		
FAIR VALUES OF FINANCIAL ASSETS MEASURED AT FAIR VALUE		
Class 1 Listed shares	1,021,739	1,144,749
Methods used to determine fair value are as follow: Quoted selling price per share at 31 March 2016 (31 March 2015)]		
Class 2 Unit trusts	5,349,072	5,189,329
Methods used to determine fair value are as follow: Valuation certificate received from Sanlam indicating the unit balance and price per unit and market value at 31 March 2016 (31 March 2015)		
	6,370,811	**6,334,078**

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 have the following levels:

Level 1 represents those assets which are measured using unadjusted quoted prices in active markets for identical assets.

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).

Level 3 applies inputs which are not based on observable market data.

LEVEL 1		
Class 1 Listed shares	1,021,739	1,144,749
Class 2 Unit trusts	5,349,072	5,189,329
	6,370,811	**6,334,078**

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.

NOTES TO THE FINANCIAL STATEMENTS

	OPENING BALANCE	GAINS OR CAPITALISA-TION LOSSES IN SURPLUS OR DEFICIT	CAPITALISA-TION	CLOSING BALANCE
	R	R	R	R
3. FINANCIAL ASSETS AT FAIR VALUE/ AMORTISED COST (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 - MARCH 2016				
Class 1 Shares	1,144,749	(123,010)	-	1,021,739
Class 2 Unit trusts	5,189,329	43,289	116,454	5,349,072
	6,334,078	**(79,721)**	**116,454**	**6,370,811**
RECONCILIATION OF FINANCIAL ASSETS AT FAIR VALUE THROUGH SURPLUS OR DEFICIT MEASURED IN LEVEL 1 - MARCH 2015				
Class 1 Shares	862,001	282,748	-	1,144,749
Class 2 Unit trusts	4,637,309	446,174	105,846	5,189,329
	5,499,310	**728,922**	**105,846**	**6,334,078**

	2016	2015 RESTATED*
	R	R
4. RECEIVABLES FROM EXHANGE TRANSACTIONS		
Trade debtors	11,322,546	24,196,507
Employee costs in advance	117,337	19,826
Deposits	1,304,463	1,380,653
Travel and subsistence prepayments	479,619	633,040
	13,223,965	**26,230,026**

The decrease in receivables from exchange transactions is mainly attributed to the change in method of recovery of project costs for major funding organisations, the costs are claimed online and received within one month of submission.

TRADE AND OTHER RECEIVABLES PAST DUE BUT NOT IMPAIRED

Trade and other receivables which are less than 3 months past due are not considered to be impaired. At March 31, 2016, R636,622 - (2015: R322,701) were past due but not impaired.

The amounts past due but not impaired are considered collectable.

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
4. RECEIVABLES FROM EXHANGE TRANSACTIONS (CONTINUED)		
The ageing of amounts past due but not impaired is as follows:		
1 month past due	392,838	302,451
2 months past due	165,191	19,833
3 months past due	78,593	417

TRADE AND OTHER RECEIVABLES IMPAIRED

The amount of the provision was R 376,080 - as of March 31, 2016 (2015: R - R 1,792,883). All trade debtor balances are reviewed and assessed for impairment. Impairment considerations include solvency of debtor and recoverability of amount owed.

	R	R
Aged as follows:		
1 month but less than 2 months past due	310,563	446,889
2 months but less than 3 months past due	53,645	649,816
More than 3 months past due	11,872	696,178

The carrying amount of trade and other receivables are denominated in the following currencies:

Rand	10,871,732	22,455,819
US Dollar	-	1,740,649
Other	450,814	39

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
4. RECEIVABLES FROM EXHANGE TRANSACTIONS (CONTINUED)		
RECONCILIATION OF PROVISION FOR IMPAIRMENT OF TRADE AND OTHER RECEIVABLES		
Opening balance	1,792,883	169,507
Provision for impairment	376,080	1,792,883
Unused amounts reversed	(1,792,883)	(169,507)
	376,080	**1,792,883**

The creation and release of provision for impaired receivables have been included in operating expenses in surplus or deficit (note 24). Amounts charged to the allowance account are generally written off when there is no expectation of recovering additional cash. All trade debtors are reviewed for impairment on a monthly basis.

	R	R
5. VAT RECEIVABLE		
VAT	12,494,929	3,860,873

	R	R
6. PREPAYMENTS		
Prepayments relate to expenditure paid in advance for subscriptions, annual computer licenses; airtickets and accommodation.		
Prepayments	2,600,610	1,794,906

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
7. CASH AND CASH EQUIVALENTS		
Cash and cash equivalents consist of:		
Cash on hand	17,050	12,843
Bank balances	449,937,469	313,777,491
	449,954,519	**313,790,334**
ANALYSIS OF BANK BALANCES		
ABSA and Standard Bank	1,848,201	1,888,613
ABSA funders accounts	-	6,227,171
First National Bank	233,792	2,487,443
Cash at the Reserve Bank	385,821,794	267,519,826
First National Bank funder accounts	62,033,682	35,654,438
	449,937,469	**313,777,491**

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.

The Motor vehicle reserve fund was established to provide self-insurance of motor vehicles with a low market value.

	R	R
MOTOR VEHICLE RESERVE FUND		
Balance at beginning of year	2,758,952	2,394,200
Allocation for the year	254,270	364,752
	3,013,222	**2,758,952**

NOTES TO THE FINANCIAL STATEMENTS

	2016			2015		
	COST / VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE	COST / VALUATION	ACCUMULATED DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE
	R	R	R	R	R	R
8. BIOLOGICAL ASSETS THAT FORM PART OF AN AGRICULTURAL ACTIVITY						
Bearer mature biological assets	1,137,529	-	1,137,529	904,792	-	904,792

RECONCILIATION OF BIOLOGICAL ASSETS THAT FORM PART OF AGRICULTURAL ACTIVITY - MARCH 2016

	OPENING BALANCE	ADDITIONS	DISPOSALS	GAINS OR LOSSES ARISING FROM CHANGES IN FAIR VALUE	OTHER CHANGES, MOVEMENTS	TOTAL
	R	R	R	R	R	R
Bearer mature biological assets	904,792	1,412,135	(34,459)	(1,186,735)	41,796	1,137,529

RECONCILIATION OF BIOLOGICAL ASSETS THAT FORM PART OF AGRICULTURAL ACTIVITY - MARCH 2015

	OPENING BALANCE	DISPOSALS	GAINS OR LOSSES ARISING FROM CHANGES IN FAIR VALUE	OTHER CHANGES, MOVEMENTS	TOTAL
	R	R	R	R	R
Bearer mature biological assets	1,067,700	(182,100)	(77,408)	96,600	904,792

SAMRC holds certain monkeys and horses for breeding and external research purposes. All research activities are monitored and controlled to ensure humane treatment of animals.

SAMRC purchased 14 monkeys from overseas to increase its rhesus monkey colony. These monkeys initial recognition costs cannot be realised and they are reflected at its fair value at 31 March 2016.

The last selling price per biological animal type is used to determine fair value.

Fair value less costs to sell of biological assets during the period.	1,137,529	904,792

NOTES TO THE FINANCIAL STATEMENTS

	2016			2015		
	COST / VALUATION	ACCUMULATED CARRYING VALUE DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE	COST / VALUATION	ACCUMULATED CARRYING VALUE DEPRECIATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE
	R	R	R	R	R	R
9. PROPERTY, PLANT AND EQUIPMENT						
Land	1,738,558	-	1,738,558	1,738,558	-	1,738,558
Buildings	89,615,455	(29,739,144)	59,876,311	75,766,002	(28,215,613)	47,550,389
Vehicles and containers	19,682,624	(13,167,088)	6,515,536	22,470,373	(14,900,205)	7,570,168
Furniture and office equipment	33,815,822	(17,966,111)	15,849,711	27,405,382	(16,871,602)	10,533,780
Computer equipment	60,329,627	(40,097,128)	20,232,499	56,459,398	(36,467,874)	19,991,524
Laboratory equipment	45,037,181	(14,340,183)	30,696,998	37,562,151	(13,884,671)	23,677,480
Other property, plant and equipment - vervet monkeys	1,501,311	(562,254)	939,057	1,465,065	(512,987)	952,078
TOTAL	**251,720,578**	**(115,871,908)**	**135,848,670**	**222,866,929**	**(110,852,952)**	**112,013,977**

NOTES TO THE FINANCIAL STATEMENTS

9. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

RECONCILIATION OF PROPERTY, PLANT AND EQUIPMENT - MARCH 2016

	OPENING BALANCE	ADDITIONS	DISPO-SABLES	TRANSFERS	OTHER CHANGES, MOVE-MENTS	DEPRECIA-TION	IMPAIR-MENT REVERSAL	TOTAL
	R	R	R	R	R	R	R	R
Land	1,738,558	-	-	-	-	-	-	1,738,558
Buildings	47,550,389	13,985,025	(31,095)	(75,782)	32,798	(1,585,024)	-	59,876,311
Vehicles and containers	7,570,168	804,309	(538,769)	-	-	(1,806,893)	486,991	6,515,536
Furniture an office equipment	10,533,780	7,956,379	(261,988)	75,782	(25,325)	(2,504,053)	75,136	15,849,711
Computer equipment	19,991,524	8,647,819	(186,036)	-	-	(8,341,132)	120,324	20,232,499
Laboratory equipment	23,677,480	10,116,128	(1,440,396)	-	1	(2,454,465)	798,250	30,696,998
Other property, plant and equipment - vervet monkeys	952,078	36,246	-	-	-	(49,267)	-	939,057
	112,013,977	**41,545,636**	**(2,458,284)**	**-**	**7,474**	**(16,740,834)**	**1,480,701**	**135,848,670**

NOTES TO THE FINANCIAL STATEMENTS

9. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

RECONCILIATION OF PROPERTY, PLANT AND EQUIPMENT - MARCH 2015

	OPENING BALANCE	ADDI-TIONS	DISPO-SABLES	TRANS-FERS	OTHER CHANG-ES, MOVE-MENTS	DEPRECIA-TION	IMPAIR-MENT LOSS	IMPAIR-MENT REVERSAL	TOTAL
	R	R	R	R	R	R	R	R	R
Land	1,738,558	-	-	-	-	-	-	-	1,738,558
Buildings	46,560,428	3,073,235	(273,195)	18,108	126	(1,828,313)	-	-	47,550,389
Vehicles and containers	9,001,929	1,881,957	(377,005)	-	-	(2,449,722)	(486,991)	-	7,570,168
Furniture and office equipment	11,205,005	1,659,903	(349,757)	(18,108)	(298)	(2,222,036)	(1)	259,072	10,533,780
Computer equipment	21,892,914	6,043,300	(372,803)	-	2	(7,810,946)	(16)	239,073	19,991,524
Laboratory equipment	24,547,732	2,887,476	(13,834,211)	-	168	(2,103,551)	(247,484)	12,427,350	23,677,480
Other property, plant and equipment - vervet monkeys	950,597	49,427	-	-	-	(47,946)	-	-	952,078
	115,897,163	**15,595,298**	**(15,206,971)**	**-**	**(2)**	**(16,462,514)**	**(734,492)**	**12,925,495**	**112,013,977**

NOTES TO THE FINANCIAL STATEMENTS

9. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

OTHER INFORMATION

	2016	2015 RESTATED*
	R	R
PROPERTY, PLANT AND EQUIPMENT FULLY DEPRECIATED AND STILL IN USE (GROSS CARRYING AMOUNT)		
Property, plant and equipment - Buildings	513	573
Property, plant and equipment - Laboratory equipment	531	524
Property, plant and equipment - Computer equipment	8,848	2,760
Property, plant and equipment - Furniture and office equipment	2,320	9,034
	12,212	**12,891**

	INDIGENOUS KNOWLEDGE SYSTEMS	TUBERCU-LOSIS UNIT DURBAN	MALARIA RESEARCH UNIT (MOZAM-BIQUE ASSETS)	ONCOLOGY
	R	R	R	R
IMPAIRED ASSETS LOSS MARCH 2016				
Property, plant and equipment - Laboratory equipment	-	-	-	28,189
	-	**-**	**-**	**28,189**
IMPAIRED ASSETS LOSS MARCH 2015				
Property, plant and equipment - Laboratory equipment	125,171	425,594	247,484	28,189
Property, plant and equipment - Computer equipment	1,835	118,472	16	-
Property, plant and equipment - Furniture and office equipment	21,622	53,514	1	-
Property, plant and equipment - Vehicles and containers	-	-	486,991	-
	148,628	**597,580**	**734,492**	**28,189**

The assets impaired for the discontinued research units is reflected above. The assets impaired constitutes 0.02% (2015 - 1.36%) of the carrying cost of property, plant and equipment and Nil% (2015 - Nil% of the carrying value of intangible assets (refer note 5).

The SAMRC Board, at its meeting of 1 March 2013, approved the restructuring of the SAMRC to focus on the 10 highest causes of death in the burden of disease in South Africa. Following this decision the Board at its meeting of 19 February 2014 further approved that discussions be held with institutions for higher learning regarding the transfer of staff and assets of the following units, Promec, Indigenous Knowledge Systems, Oncology and Tuberculosis. To ensure that research in these areas was continued at these institutions it was further agreed that the assets be transferred for no consideration.

The approval for this transaction was received from the Minister of Health in terms of the SAMRC materiality framework on 3 April 2014.

During the period under review the impaired assets of Promec, Indigenous Knowledge Systems and Tuberculosis were transferred to an institution of higher learning/clinics.

NOTES TO THE FINANCIAL STATEMENTS

9. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

All items of property, plant and equipment are owned by the entity.

DEEMED COST

Deemed cost was determined using fair value.

	COST / VALUATION	ACCUMULATED AMORTISATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE	COST / VALUATION	ACCUMULATED AMORTISATION AND ACCUMULATED IMPAIRMENT	CARRYING VALUE
	R	R	R	R	R	R
10. INTANGIBLE ASSETS						
Computer software	16,534,814	(9,530,561)	7,004,253	15,328,639	(7,644,091)	7,684,548

RECONCILIATION OF INTANGIBLE ASSETS - MARCH 2016

	OPENING BALANCE	ADDITIONS	AMORTISATION	TOTAL
	R	R	R	R
Computer software	7,684,548	1,206,176	(1,886,471)	7,004,253

RECONCILIATION OF INTANGIBLE ASSETS - MARCH 2015

	OPENING BALANCE	ADDITIONS	DISPOSABLES	AMORTISATION	IMPAIRMENT REVERSAL	TOTAL
	R	R	R	R	R	R
Computer software	8,203,875	1,070,908	(76,160)	(1,590,235)	76,160	7,684,548

NOTES TO THE FINANCIAL STATEMENTS

NAME OF COMPANY	HELD BY	% HOLDING 2016	% HOLDING 2015	CARRYING AMOUNT 2016	CARRYING AMOUNT 2015
		%	%	R	R
11. INVESTMENTS IN CONTROLLED ENTITIES					
Medres (Pty) Ltd		100.00	100.00	1	1
Jirehsa Medical (Pty) Ltd	Medres (Pty) Ltd	25.00	25.00	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 (Pty) Ltd have not been consolidated with those of the SAMRC, because the companies are dormant.

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 staff manages the entity.

	2016	2015 RESTATED*
	R	R
12. PAYABLES FROM EXCHANGE TRANSACTIONS		
Trade payables	75,219,343	31,546,964
Leave accrual	17,631,864	16,359,716
Accruals	7,963,143	11,086,808
Interest due to funders	1,422,882	5,953,488
Credit cards	-	(18,437)
	102,237,232	**64,928,539**

The increase in accounts payable is attributed to amounts owing in respect of grants awarded.

	2016	2015 RESTATED*
	R	R
LEAVE ACCRUAL		
Balance at the beginning of the year	16,359,716	14,965,744
Leave payouts	(675,947)	(1,519,927)
Movement recognised in profit or loss	1,948,095	2,913,899
	17,631,864	**16,359,716**

NOTES TO THE FINANCIAL STATEMENTS

	OPENING BALANCE	ADDITIONS	UTILISED DURING THE YEAR	REVERSED DURING THE YEAR	TOTAL
	R	R	R	R	R
13. PROVISIONS					
RECONCILIATION OF PROVISIONS - MARCH 2016					
Provision for bonus dispute	929,019	-	-	-	929,019
Provision for collaborative research	4,241,579	-	(4,241,579)	-	-
Provision for performance bonus	3,573,000	3,523,376	(3,573,000)	-	3,523,376
Employee benefit cost provision	-	970,216	-	-	970,216
Other provisions	17,189,562	563,320	(15,583,574)	(386,930)	1,782,378
	25,933,160	**5,056,912**	**(23,398,153)**	**(386,930)**	**7,204,989**

	OPENING BALANCE	ADDITIONS	UTILISED DURING THE YEAR	TOTAL
	R	R	R	R
RECONCILIATION OF PROVISIONS - MARCH 2015				
Restructuring	655,010	-	(655,010)	-
Provision for bonus dispute	30,965,460	-	(30,036,441)	929,019
Provision for collaborative research	2,692,136	4,241,579	(2,692,136)	4,241,579
Provision for performance bonus	-	3,573,000	-	3,573,000
Other provisions	4,185,993	13,003,569	-	17,189,562
	38,498,599	**20,818,148**	**(33,383,587)**	**25,933,160**

COLLABORATIVE RESEARCH COSTS

The provision relates to collaborative research costs for self-initiated research grants and extra-mural units at NHLS and University of Free State, that will be settled in the next twelve months.

PROVISION FOR BONUS DISPUTE

The bonus dispute provision relates to the estimated legal costs that need to paid to NEHAWU.

OTHER PROVISIONS

The other provisions for March 2016 relate to the Department of Labour assessment for the claim for occupational injury on duty assessment for 2016 (COIDA) estimate; grant funds received on completed projects and projects relating to research units that closed during the rationalisation process. During the period under review grant funds were repaid to the Global fund, NIH and University of the Free State. The March 2015 other provisions relate to the Department of Labour assessment for the claim for occupational injury on duty assessment for 2015 (COIDA) estimate and grant funds received on completed projects and projects relating to research units closed during the rationalisation process that need to be repaid to the funders within the next twelve months. In 2015 financial year the grant funds that need to be repaid amounted to R 16,790,036, being R12,604,043 that needed to be repaid to Global Fund; Department of Science and Technology; National Research Foundation.

NOTES TO THE FINANCIAL STATEMENTS

13. PROVISIONS (CONTINUED)

EMPLOYEE BENEFIT COST PROVISION

The 2015/2016 promotion process was finalised late March 2016, the estimated amount of R970,216 was provided and will be paid before the end of June 2016.

PROVISION FOR PERFORMANCE BONUS

The performance bonus cycle was changed after discussions and agreement with the union. The Board approved the new bonus cycle, which will be paid after the financial year. The 2014/2015 bonus was paid in December 2015.

	2016	2015 RESTATED*
	R	R
14. DEFERRED INCOME		
The increase in deferred income can be attributed to the following contract funds received in advance: DFID; Department of Science and Technology; Bill & Melinda Gates Foundation; MRC UK to fund Newton TB and Non Communicable Diseases projects; Grand Challenges SA; American Jewish World Service and MRC UK to fund the MIND project.		
Deferred income	206,000,975	123,424,757
SUMMARY OF DEFERRED INCOME		
Research grants received in advance	205,711,547	122,110,212
Other funds received in advance	289,428	1,314,545
	206,000,975	**123,424,757**

	2016	2015 RESTATED*
	R	R
15. EMPLOYEE BENEFIT OBLIGATIONS		
Post retirement medical aid obligation	5,432,000	4,005,000
Pension fund - Defined benefit obligation	352,000	8,179,000
	5,784,000	**12,184,000**

POST RETIREMENT BENEFITS

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 relevant assets are included in investments and cash balances.

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)
- MRC 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 fund was actuarially valued at 1 April 2014. Next statutory valuation for the fund is 1 April 2017.

NOTES TO THE FINANCIAL STATEMENTS

15. EMPLOYEE BENEFIT OBLIGATIONS (CONTINUED)

(c) The first two funds offer defined benefits to staff. With regard to the MRC Pension fund, some members are on a defined benefit scheme, while the remainder are on a defined contribution scheme.

The MRC Pension Fund and the Post retirement Medical Aid Plan is valued annually in compliance with GRAP 25.

	2016	2015 RESTATED*
	R	R
POST RETIREMENT MEDICAL AID PLAN		
The amounts recognised in the statement of financial position are as follows:		
CARRYING VALUE		
Present value of the defined benefit obligation-wholly unfunded	(1,144,000)	(1,067,000)
Present value of the defined benefit obligation-partly or wholly funded	(21,505,000)	(21,763,000)
Fair value of plan assets	17,217,000	18,825,000
NET LIABILITY	**(5,432,000)**	**(4,005,000)**
CHANGES IN THE PRESENT VALUE OF THE DEFINED BENEFIT OBLIGATION ARE AS FOLLOWS:		
Opening balance	22,830,000	21,423,000
Interest costs	1,746,000	1,786,000
Service costs	41,000	54,000
Benefits paid	(1,964,000)	(1,790,000)
Actuarial (gain) loss	(4,000)	1,357,000
CLOSING BALANCE	**22,649,000**	**22,830,000**
NET EXPENSE RECOGNISED IN THE STATEMENT OF FINANCIAL PERFORMANCE		
Current service cost	41,000	54,000
Interest cost	1,746,000	1,786,000
Expected return on assets	(1,427,000)	(1,564,000)
Recognised actuarial (gain) and loss	1,067,000	282,000
TOTAL INCLUDED IN EMPLOYEE RELATED COST	**1,427,000**	**558,000**
CALCULATION OF ACTUARIAL GAINS AND LOSSES		
Actuarial (gains) losses – Obligation	(4,000)	1,357,000
Actuarial (gains) losses – Plan assets	1,071,000	(1,075,000)
	1,067,000	**282,000**

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
15. EMPLOYEE BENEFIT OBLIGATIONS (CONTINUED)		
Changes in the fair value of plan assets are as follows:		
Opening balance	18,825,000	17,976,000
Actuarial gains and (losses)	(1,071,000)	1,075,000
Expected return	1,427,000	1,564,000
Benefits paid	(1,964,000)	(1,790,000)
CLOSING BALANCE	**17,217,000**	**18,825,000**

The entity will investigate the options available to eliminate the net liability as far as possible.

	2016	2015 RESTATED*
KEY ASSUMPTIONS USED		
Assumptions used at the reporting date:		
Discount rates used	9.30 %	8.00 %
General increases to medical aid subsidy	8.00 %	6.60 %
Expected rate of return on assets	9.30 %	8.00 %
Proportion 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 to 1 May 1998	65	65
Retirement age for staff who joined after to 1 May 1998	65	65

The expected rate of return on plan assets is based on market expectations, 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 South African long-term bonds.

NOTES TO THE FINANCIAL STATEMENTS

	IMPACT ON LIABILITY RM	% INCREASE/ DECR EASE
15. EMPLOYEE BENEFIT OBLIGATIONS (CONTINUED)		
OTHER ASSUMPTIONS		
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:		
MARCH 2016		
Assumptions as above	22,649	-
Discount rate - increases by 1% p.a.	20,922	(8)
Discount rate - decreases by 1% p.a.	24,662	9
Medical inflation - increases by 1% p.a.	24,501	8
Medical inflation - decreases by 1% p.a.	20,034	(7)
MARCH 2015		
Assumptions as above	22,830	
Discount rate - increases by 1% p.a.	21,290	(7)
Discount rate - decreases by 1% p.a.	25,288	11
Medical inflation - increases by 1% p.a.	25,102	10
Medical inflation - decreases by 1% p.a.	21,425	(6)

Amounts for the current period and previous four years are as follows:

	2016	2015	2014	2013	2012
	R	R	R	R	R
Defined benefit obligation - partially or wholly unfunded	21,505,000	21,763,000	20,534,000	22,932,000	20,399,000
Defined benefit obligation - wholly unfunded	1,144,000	1,067,000	889,000	1,687,000	1,332,000
Plan assets	17,217,000	18,825,000	17,976,000	18,501,000	17,968,000

	2016	2015 RESTATED*
	R	R
PENSION FUNDS		
DEFINED BENEFIT OBLIGATION - WHOLLY FUNDED		
Present value of obligation	(95,825,000)	(106,556,000)
Fair value of plan assets	95,473,000	98,377,000
NET (LIABILITY) ASSET	**(352,000)**	**(8,179,000)**

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
15. EMPLOYEE BENEFIT OBLIGATIONS (CONTINUED)		
CHANGES IN THE PRESENT VALUE OF THE DEFINED BENEFIT OBLIGATION ARE AS FOLLOWS:		
Opening defined benefit obligation	106,556,000	88,433,000
Benefits paid	(19,027,000)	(10,434,000)
Service cost	4,017,000	4,887,000
Interest cost	7,928,000	7,076,000
Actuarial loss and (gain)	(4,236,000)	16,594,000
Member contributions	1,282,000	-
Re-insurance premiums	(361,000)	-
Expenses	(334,000)	-
CLOSED DEFINED BENEFIT OBLIGATION CLOSING BALANCE	**95,82,000**	**106,556,000**
CHANGES IN THE FAIR VALUE OF PLAN ASSETS ARE AS FOLLOWS:		
Opening fair value of plan assets after limitation	98,377,000	89,805,000
Additional payment by SAMRC	6,085,000	-
Contributions	4,897,000	3,935,000
Benefits paid	(19,027,000)	(10,434,000)
Expected return on assets	7,333,000	7,356,000
Actuarial gain and (loss)	(1,497,000)	7,715,000
Re-insurance premiums	(361,000)	-
Expenses	(334,000)	-
CLOSING FAIR VALUE OF PLAN ASSETS	**95,473,000**	**98,377,000**
CALCULATION OF ACTUARIAL GAINS AND LOSSES		
Actuarial (gains) and loss - Obligation	(4,236,000)	16,594,000
Actuarial (gains) and loss - Plan assets	1,497,000	(7,715,000)
	(2,739,000)	**8,879,000**
STAFF COSTS INCLUDES THE FOLLOWING IN RESPECT OF THE DEFINED BENEFIT PENSION PLAN:		
Current service cost	4,017,000	4,887,000
Interest cost	7,928,000	7,076,000
Expected return on planed assets	(7,333,000)	(7,356,000)
Net actuarial (losses) and gains recognised in current year	(2,739,000)	8,879,000
Previous asset limitation	(3,615,000)	(5,307,000)
	(1,742,000)	**8,179,000**

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015
	%	%
15. EMPLOYEE BENEFIT OBLIGATIONS (CONTINUED)		
THE PRINCIPAL ACTUARIAL ASSUMPTIONS USED IN DETERMINING THE PENSION PLAN PER ANNUM WERE:		
General inflation rate	7.50	5.49
Discount rate	9.80	7.80
Expected return on plan assets	9.80	7.80
Salary inflation - percentage plus merit increase	8.50	6.49

	2016	2015	2014	2013	2012
	R	R	R	R	R
Defined benefit obligation	95,825,000	106,556,000	88,433,000	116,740,000	102,251,000
Plan assets	95,473,000	98,377,000	89,805,000	116,997,000	108,539,000

	2016	2015 RESTATED*
	R	R
16. EARMARKED FUNDS		
Botha trust	151,636	151,636
Bruhns trust	1,036,097	987,507
Melville Douglas trust	13,325	13,325
Q&S Abdool Karim trust	2,138,004	2,007,670
FJ Kleynhans trust	111,442	-
	3,450,504	**3,160,138**

The Earmarked funds are donations received for clearly defined purposes. During the current period a bequest of R111,442 for cancer research was received from the deceased estate of FJ Kleynhans, a trust fund was established for the bequest. During the prior year under review a new fund was established from a donation received from Q and S Abdool Karim of R1 million and R1 million matched by SAMRC, interest is capitalised on this fund.

The Earmarked funds are held at the Reserve Bank.

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
17. ACCUMULATED SURPLUS		
Accumulated surplus	303,957,588	243,218,249

Accumulated surplus will be used to fund capital projects, the 2016/2017 budget deficit and other commitments.

	2016	2015 RESTATED*
	R	R
18. TOTAL REVENUE		
Income from contracts, grants and services rendered	302,448,665	275,887,835
Rental income	4,316,568	2,925,031
Other income	5,651,108	3,802,268
Interest received - investment	25,845,197	19,045,116
Dividends received	102,691	92,444
Government grants & subsidies	547,273,684	391,518,421
	885,637,913	**693,271,115**
THE AMOUNT INCLUDED IN REVENUE ARISING FROM EXCHANGES OF GOODS OR SERVICES ARE AS FOLLOWS:		
Income from contracts, grants and services rendered	302,448,665	275,887,835
Rental income	4,316,568	2,925,031
Other income	5,651,108	3,802,268
Interest received - investment	25,845,197	19,045,116
Dividends received	102,691	92,444
	338,364,229	**301,752,694**
THE AMOUNT INCLUDED IN REVENUE ARISING FROM NON-EXCHANGE TRANSACTIONS IS AS FOLLOWS:		
Government grants & subsidies	547,273,684	391,518,421
REVENUE		
Income from contracts, grants and services rendered	302,448,665	275,887,835
Government grants	547,273,684	391,518,421
	849,722,349	**667,406,256**

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
19. OTHER INCOME AS REFLECTED IN THE STATEMENT OF FINANCIAL PERFORMANCE		
Rental income	4,316,568	2,925,031
Gain on foreign exchange	732,972	1,450,343
Other income	5,651,108	3,802,268
	10,700,648	**8,177,642**

	2016	2015 RESTATED*
	R	R
20. INVESTMENT REVENUE		
DIVIDEND REVENUE		
Listed financial assets - Local	102,691	92,444
INTEREST REVENUE		
Unit trusts	38,081	47,441
Bank	462,030	531,520
Interest charged on trade and other receivables	69,628	8,936
Corporation for public deposits	25,275,458	18,457,219
	25,845,197	**19,045,116**
	25,947,888	**19,137,560**

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
21. EMPLOYEE RELATED COSTS		
Basic	161,023,323	147,349,475
Other non pensionable allowances	71,939,664	71,138,115
Bonus	4,921,717	4,405,989
UIF	1,047,747	1,186,718
SDL	2,522,877	2,646,092
Leave payments	2,448,159	2,833,052
Adjustments from the application of IAS 19/GRAP 25	(315,115)	8,737,000
Other salary related costs	5,878,899	4,536,563
Defined pension benefit plan expense - current service cost	3,870,399	2,848,832
Overtime payments	519,671	145,095
Temporary staff	10,857,779	14,675,251
Retrenchments	2,206,305	2,863,718
Defined pension contribution plan expense	15,261,696	13,865,198
Promotion provision	970,216	-
	283,153,337	**277,231,098**

	2016	2015 RESTATED*
	R	R
22. IMPAIRMENT OF ASSETS		
IMPAIRMENTS		
Property, plant and equipment	-	(734,492)

- Impairment of property, plant and equipment was identified at the year-end by management. Internal indicators such as the research study being finalised and the Malaria unit being closed were key factors in deciding to impair the property, plant and equipment.

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
22. IMPAIRMENT OF ASSETS (CONTINUED)		
REVERSAL OF IMPAIRMENTS		
Property, plant and equipment	1,480,701	12,925,495
• The reversal of previously impairment of property, plant and equipment was identified by management for assets that were disposed (R1,291,794) or brought back into use (R188,907). At March 2015 - the reversal of impaired assets was R12,779,526 for assets that have been disposed and R145,969 for assets that have been brought back into use.		
Intangible assets	-	76,160
• Impairment reversal was identified at the year-end assessment, the software previously impaired was disposed.		
	1,480,701	**13,001,655**
TOTAL IMPAIRMENT LOSSES (RECOGNISED) REVERSED	**1,480,701**	**12,267,163**

	2016	2015 RESTATED*
	R	R
23. FINANCE COSTS		
Other interest paid	1,294,175	1,370,197

SAMRC had to refund interest to its funders for monies received in advance (R634,764); to the earmarked funds (R178,925) and to staff for late payment of salary increases (R450,361). 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 (R30,125).

In 2015 an amount of R1,288,140 was paid on the additional bonus award by the CCMA for the period April to July 2014.

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
24. DEBT IMPAIRMENT		
Debt impairment	-	48,818
Provision / (Reversal) of debt impairment	(1,294,477)	1,791,819
	(1,294,477)	**1,840,637**

The debt impairment reflected above include the current periods provision for bad debt of R376,080 (including vat of R12,358) and reversal of the previous year's provision (March 2015 provision for bad debts of R1,792,883 including vat of R134,684).

	2016	2015 RESTATED*
	R	R
25. GENERAL EXPENSES		
Advertising	2,793,887	1,733,536
Auditors remuneration	2,561,206	2,462,008
Bank charges	347,325	160,495
Computer expenses	14,749,751	12,289,004
Consulting and professional fees	7,966,359	11,826,268
Insurance	2,513,620	2,780,763
Magazines, books and periodicals	2,498,215	5,573,810
Postage and courier	1,119,502	1,544,593
Printing and stationery	4,060,687	3,783,482
Security	6,977,875	6,056,479
Subscriptions and membership fees	677,331	652,968
Telephone and fax	2,809,961	2,801,320
Training	2,157,076	2,467,312
Travel, subsistence and conference attendance	28,847,711	31,869,654
Utilities	13,590,945	11,467,287
Laboratory operating cost	12,539,040	15,210,974
Collaborative research	389,747,411	261,346,256
Other expenses	6,688,198	6,746,827
	502,646,100	**380,773,036**

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
25. GENERAL EXPENSES (CONTINUED)		
TRAVEL, SUBSISTENCE AND CONFERENCE ATTENDANCE		
Local travel	6,368,881	5,498,063
Overseas travel	6,544,639	5,448,467
Accommodation - local and overseas	6,312,306	6,011,156
Subsistence and travel expenditure	6,465,873	11,717,039
Conference expenditure	3,156,012	3,194,929
	28,847,711	**31,869,654**
OTHER EXPENSES		
Canteen costs	1,151,963	706,240
Personnel teas	760,027	750,835
Royalty distribution	5,633	9,755
Hire of premises and equipment	4,697,618	4,159,341
Licences	63,558	88,104
Staff recruitment costs	9,399	217,390
Transfer of contract funds	-	815,162
	6,688,198	**6,746,827**

	2016	2015 RESTATED*
	R	R
26. FAIR VALUE ADJUSTMENTS		
Biological assets - (Fair value model)	(1,186,735)	(77,408)
Other financial assets		
• Other financial assets at fair value	(79,721)	728,922
	(1,266,456)	**651,514**

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
27. AUDITORS' REMUNERATION		
Fees	2,561,206	2,462,008

	2016	2015 RESTATED*
	R	R
28. OPERATING SURPLUS		
Operating surplus for the year is stated after accounting for the following:		
OPERATING LEASE CHARGES		
Premises		
• Contractual amounts	4,800,490	4,718,587
Loss on sale of property, plant and equipment	(2,314,732)	(14,823,035)
Impairment on property, plant and equipment	-	(734,492)
Reversals of impairments	1,480,701	13,001,655
Amortisation on intangible assets	(1,886,471)	(1,590,235)
Depreciation on property, plant and equipment	(16,740,834)	(16,462,514)
Employee costs	(283,153,337)	(277,231,098)

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
29. CASH GENERATED FROM (USED IN) OPERATIONS		
Surplus / (deficit)	60,739,339	(3,748,531)
Adjustments for:		
Depreciation and amortisation	18,627,305	18,052,749
(Gain) /loss on sale of assets and liabilities	2,314,732	14,823,035
Gain on foreign exchange	(732,972)	(1,450,343)
Fair value adjustments	1,266,456	(651,514)
Impairment reversals	(1,480,701)	(12,267,163)
Debt impairment	(1,294,477)	1,840,637
Movements in retirement benefit assets and liabilities	(6,400,000)	8,737,000
Movements in provisions	(18,728,171)	(12,565,439)
Capitalisation of financial assets	(116,454)	-
Non cash adjustment on biological assets	(41,796)	(19,192)
Other changes on property, plant and equipment	(7,474)	505
Changes in working capital:		
Receivables from exchange transactions	15,033,510	7,325,494
Prepayments	(805,704)	388
Payables from exchange transactions	37,308,694	(32,547,266)
VAT	(8,634,056)	4,432,672
Deferred income	82,576,218	708,305
	179,624,449	**(7,328,663)**

NOTES TO THE FINANCIAL STATEMENTS

	AT FAIR VALUE	AT AMORTISED COST	TOTAL
	R	R	R

30. FINANCIAL INSTRUMENTS DISCLOSURE

CATEGORIES OF FINANCIAL INSTRUMENTS

MARCH 2016

FINANCIAL ASSETS

Trade and other receivables from exchange transactions	-	13,223,965	13,223,965
Cash and cash equivalents	-	449,954,519	449,954,519
Investment in controlled entities	2	-	2
Other financial assets	-	6,370,811	6,370,811
	2	**469,549,295**	**469,549,297**

FINANCIAL LIABILITIES

	AT AMORTISED COST	TOTAL
Trade and other payables from exchange transactions	102,237,232	102,237,232

MARCH 2015

FINANCIAL ASSETS

	AT FAIR VALUE	AT AMORTISED COST	TOTAL
Trade and other receivables from exchange transactions	26,230,026	-	26,230,026
Cash and cash equivalents	313,790,334	-	313,790,334
Investment in controlled entities	2	-	2
Other financial assets	6,334,078	-	6,334,078
Other financial assets - loans and receivables	-	235,307	235,307
	346,354,440	**235,307**	**346,589,747**

FINANCIAL LIABILITIES

	AT FAIR VALUE	TOTAL
Trade and other payables from exchange transactions	64,928,539	64,928,539

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
31. COMMITMENTS		
AUTHORISED COMMITMENTS		
ALREADY CONTRACTED FOR BUT NOT PROVIDED FOR		
• Property, plant and equipment	7,818,764	11,708,597
• Goods and services	11,460,902	1,223,731
• Research grants	7,917,447	8,442,982
	27,197,113	**21,375,310**
Already contracted for but not provided for	27,197,113	21,375,310

This committed expenditure relates to property, plant and equipment, goods and services and research grants and will be financed by retained surpluses, existing cash resources, funds internally generated, etc.

OPERATING LEASES - AS LESSEE (EXPENSE)		
MINIMUM LEASE PAYMENTS DUE		
- within one year	362,000	1,693,352
- in second to fifth year inclusive	24,000	287,490
	386,000	**1,980,842**
OPERATING LEASES - AS LESSOR (INCOME)		
MINIMUM LEASE PAYMENTS DUE		
- within one year	4,328,328	3,706,902
- in second to fifth year inclusive	3,227,636	3,312,998
	7,555,964	**7,019,900**

Certain of the entity's buildings generate rental income. Lease agreements have terms from 12 months to 9 years and eleven months.

NOTES TO THE FINANCIAL STATEMENTS

32. CONTINGENCIES

CONTINGENT LIABILITIES

The SAMRC recognised trade union, NEHAWU, has referred two matters to the CCMA.

A dispute on the effective date of the salary increments for promoted staff which NEHAWU maintains should have been from 1 April 2015 and not 1 November 2015 as implemented. The additional cost of this change is estimated at R1,341,580.

A dispute on the quantum of the bonus provided by the SAMRC at 1.5% of the total remuneration.

NEHAWU has referred both matters for arbitration set down for 22 and 23 August 2016.

CONTINGENT ASSETS

Board members emoluments were paid at the 2015/2016 Category B rates without the approval of Department of Health (DOH). The overpayment of R113,368 is recoverable from the individual board members if approval is not obtained from DOH. The required form was submitted to DOH on 27 May 2016.

33. RELATED PARTIES

EXECUTIVE AUTHORITY	Dept. of Health (DOH)
CONTROLLED ENTITIES	Medres (Pty) Ltd Refer to note 11
ASSOCIATES	Jiresha Medical (Pty) Ltd Refer to note 5
MEMBERS OF KEY MANAGEMENT	Prof. S Abdool Karim (Interim President and Director of CAPRISA (MRC debtor; extra-mural unit and grant recipient) Contract ended 31 March 2014
	Prof G Gray (President appointed 1 April 2014) (Wits Health Consortium - Perinatal HIV Research Unit researcher and NIH and; NRF grant recipient)
	Mr. N Buick (Chief Financial Officer appointed 16 July 2012)
	Mr. M Bikwani (Executive Manager Human Capacity Development appointed 1 April 2013 termination date 31 July 2015)
	Dr. N Bhagwandin (Executive Manager: Strategic Research Initiatives - no longer an EMC member from 1 October 2014)
	Dr. R Gordon (Ex officio Executive Management Committee member from 1 April 2013 and employee of Medicines for Malaria Ventures (MRC debtor) Prof. C Parry (Acting Executive Director: Research from 1 November 2012 to 30 September 2014)
	Prof. R Jewkes (Acting Executive Director: Research from 1 February 2013 t0 30 September 2014)
	Prof. A Bunn (Ex officio Executive Management Committee member from 1 January 2013 to 30 April 2013) Appointed as a consultant via Cardio Respiratory CC
	Prof. DC Stefan (Vice President appointed 1 October 2014)
	Adv. N Bhuka appointed an EMC member from 1 October 2014)
	Prof. MJ Mphahlele (Vice President appointed 1 October 2014 and extra mural unit director at Sefako Makgatho Health Sciences University)

NOTES TO THE FINANCIAL STATEMENTS

33. RELATED PARTIES (CONTINUED)

BOARD MEMBER:	(Board members are employed by Universities who contract with SA Medical Research Council for grant income or collaborative research
	Dr S Gumbi (Director of AEC Amersham - MRC supplier and an employee of Technology Innovation Agency an MRC debtor till 30 November 2015) Prof. M Sathekge (University of Pretoria - grant recipient and debtor)
	Prof. Z Dlamini (UNISA - supplier and debtor till 31 May 2015.Mangosuthu University of Technology grant recipient and debtor)
	Prof. K Mokwena & Prof. P Mntla (Univ. of Limpopo renamed to Sefako Makgatho Health Sciences University - grant recipient and debtor)
	Prof. K Moodley (Univ. of Stellenbosch - grant recipient and debtor, resigned as Board member effective 1 July 2014)
	Prof. C Feldman and Dr. F Conradie (Univ. of Witwatersrand and Wits Health Consortium- grant recipient and debtor)
	Dr. Z Kwitshana (Univ. KwaZulu Natal - supplier and debtor till 31 March 2016; Mangosuthu University of Technology grant recipient and debtor.)
	Prof. K Mfenyana (Walter Sisulu University - grant recipient and debtor)
	Prof, Y Osman (Univ. of Western Cape - grant recipient and debtor)
	Prof. K Setswe (HSRC - grant recipient and debtor)
	Prof. A Walubo (Free State Univesity - grant recipient and debtor)
EMPLOYEE: MR P SWART	Bestmed Medical Aid (MRC medical aid insurers, staff member was a Board trustee till November 2014)
EMPLOYEE: MR P CHARLS	Tertiary Education and Research Network of South Africa (TENET) (SAMRC internet service provider, the staff member is a co-opted director on the TENET Board effective 30 April 2015)
EMPLOYEE: DR N ABRAHAMS	Sonke Gender Justice Network (service provider, staff member is a director)
EX OFFICIO EXECUTIVE MANAGEMENT COMMITTEE/ RETIRED EMPLOYEE	Prof. A Bunn (Member of Cardio Respiratory Computers CC MRC supplier)

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
33. RELATED PARTIES (CONTINUED)		
LOAN ACCOUNTS - OWING (TO) BY RELATED PARTIES		
Medres (Pty) Ltd (The loan is not considered to be recoverable)	184,074	184,074
AMOUNTS INCLUDED IN TRADE RECEIVABLE (TRADE PAYABLE) REGARDING RELATED PARTIES		
University of Kwazulu-Natal	-	(677,063)
University of Pretoria	637,224	-
Mangosuthu University of Technology	(2,221,000)	-
Sefako Makgatho Health Sciences University	(3,623,200)	-
University of Western Cape	17,052	10,547
University of Witwatersrand	(390,225)	(353,064)
University of Free State	10,672	-
Walter Sisulu University	342,000	-
Wits Health Consortium	(17,008,709)	(1,340,296)
University of Western Cape	- 19,667	(1,375,000)
Sefako Makgatho Health Sciences University		-
Mangosuthu University of Technology	18,836	-
DEFERRED INCOME		
Dept. of Health (DOH)	4,267,239	4,936,133
Dept. of Science and Technology (DST)	47,875,079	33,773,503
REVENUE		
Dept. of Health (DOH)	547,273,684	391,518,421
Dept. of Health (DOH) Contracts	3,281,579	7,466,733
University of Stellenbosch	-	132,547
Wits Health Consortium	-	1,186,104
University of Witwatersrand	185,347	26,578
Dept. of Science and Technology (DST)	54,228,791	52,968,508

NOTES TO THE FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R
33. RELATED PARTIES (CONTINUED)		
Human Sciences Research Council (HSRC)	91,156	37,281
Mangosuthu University of Technology	18,836	-
Walter Sisulu University	300,000	-
University of Pretoria	587,449	-
UNISA	-	141,171
University of Free State	530,718	-
Sefako Makgatho Health Sciences University	17,252	-
University of KwaZulu- Natal	8,238	126,170
University of Western Cape	734,439	90,512
	607,257,489	**453,694,025**
EXPENDITURE INCURRED WITH RELATED PARTY SUPPLIERS		
University of Pretoria	12,845,956	13,650,154
University of Stellenbosch	-	19,961,367
Wits Health Consortium	45,198,314	41,360,741
University of Witwatersrand	16,082,710	3,164,689
University of Kwazulu-Natal	-	4,496,484
University of Western Cape	8,059,990	8,001,215
University of Free State	6,406,071	2,632,281
Walter Sisulu University	1,367,054	1,356,140
Cardio Respiratory Computers CC	-	165,561
Bestmed Medical Aid	-	5,333,607
Mangosuthu University of Technology	2,148,333	-
Tertiary Education and Reserach Network of South Africa (TENET)	694,235	-
Sefako Makgatho Health Sciences University	11,292,102	84,000
Sonke Gender Justice Network	1,734,327	-
	105,829,092	**100,206,239**

NOTES TO THE FINANCIAL STATEMENTS

33. RELATED PARTIES (CONTINUED)

EXECUTIVE AUTHORITY INFORMATION

MINISTER: DR. A MOTSOALEDI

No subsistence, travel and other related re-imbursement costs have been paid.

DIRECTOR GENERAL: MS. PRECIOUS MATSOSO

No subsistence, travel and other related re-imbursement costs have been paid.

	2016	2015 RESTATED*
	R	R
EXECUTIVE DIRECTORS/MANAGERS LEAVE BALANCES		
Adv. N Bhuka	91,294	32,376
Mr. M Bikwani	-	168,998
Mr. N Buick	147,797	112,822
Dr. R Gordon	67,270	59,844
Prof. G Gray	351,521	161,700
Prof. M Mphahlele	213,792	76,000
Prof. D Stefan	129,895	67,270
	1,001,569	**679,010**

NOTES TO THE FINANCIAL STATEMENTS

	EMOLUMENTS	VEHICLE & PARKING & CELLPHONE ALLOWANCE	REIMBURSE-MENT	ACCOMMO-DATION AND ENTERTAIN-MENT	LOCAL AIRTRAVEL AND PARKING	TOTAL
	R	R	R	R	R	R
34. MEMBER'S EMOLUMENTS						
EXECUTIVE						
MARCH 2016						
Professor M Sathekge	115,712	13,091	-	3,762	50,833	183,398
Professor E Bukusi	59,696	3,684	3,557	11,050	216,044	294,031
Doctor F Conradie	52,808	3,684	-	1,285	13,407	71,184
Professor Z Dlamini	68,880	3,989	-	7,286	109,537	189,692
Professor C Feldman	32,144	3,341	-	-	7,724	43,209
Doctor S. Gumbi	44,048	885	-	2,362	23,075	70,370
Doctor P. Hanekom	86,736	-	-	1,285	64,409	152,430
Doctor Z Kwitshana	59,696	3,684	-	6,291	65,380	135,051
Professor K Mfenyana	27,552	4,040	-	5,073	26,103	62,768
Professor P Mntla	52,808	5,881	-	-	13,406	72,095
Doctor K Mokwena	84,440	5,037	2,470	8,708	60,563	161,218
Professor Y Osman	61,992	3,684	-	-	24,400	90,076
Advocate J Ralefatane	52,808	3,750	1,227	1,285	23,415	82,485
Professor K Setswe	-	-	-	-	13,407	13,407
Professor A Walubo	48,216	2,905	-	2,554	34,659	88,334
	847,536	**57,655**	**7,254**	**50,941**	**746,362**	**1,709,748**

NOTES TO THE FINANCIAL STATEMENTS

34. MEMBER'S EMOLUMENTS (CONTINUED)

	EMOLUMENTS	VEHICLE & PARKING & CELLPHONE ALLOWANCE	ACCOMMO-DATION AND ENTERTAIN-MENT	LOCAL AIRTRAVEL AND PARKING	TOTAL
	R	R	R	R	R
MARCH 2015					
Professor M Sathekge	175,536	10,794	8,111	52,289	246,730
Professor E Bukusi	47,152	4,298	12,204	101,421	165,075
Doctor F Conradie	41,073	5,013	1,964	3,774	51,824
Professor Z Dlamini	97,547	4,220	11,857	37,526	151,150
Professor C Feldman	36,632	2,778	880	7,631	47,921
Doctor S Gumbi	115,216	2,158	5,901	44,968	168,243
Doctor P Hanekom	121,720	1,322	1,964	52,583	177,589
Doctor Z Kwitshana	81,968	4,298	17,213	57,986	161,465
Professor K Mfenyana	43,160	12,132	5,917	33,688	94,897
Professor P Mntla	45,336	6,466	881	7,631	60,314
Doctor K Mokwena	120,192	5,860	9,010	44,105	179,167
Professor K Moodley	12,336	-	1,717	300	14,353
Professor Y Osman	67,456	4,298	2,012	18,263	92,029
Ms G Spelman	43,520	3,070	5,944	44,232	96,766
Advocate J Ralefatane	54,400	4,920	2,845	7,631	69,796
Professor A Walubo	63,104	4,627	9,897	38,097	115,725
	1,166,348	**76,254**	**98,317**	**552,125**	**1,893,044**

NOTES TO THE FINANCIAL STATEMENTS

34. MEMBER'S EMOLUMENTS (CONTINUED)

	PACKAGE TOTAL INCL. ALLOWANCES	BONUS	S & T	COMPANY CONTRIBU-TIONS	TOTAL
	R	R	R	R	R
EXECUTIVE DIRECTORS/MANAGERS EMOLUMENTS					
MARCH 2016					
G Gray	2,423,110	-	11,578	160,882	2,595,570
N Bhuka	1,500,320	35,412	275	81,658	1,617,665
M Bikwani	2,198,536	-	-	29,566	2,228,102
N Buick	2,268,516	86,967	12,508	212,386	2,580,377
R Gordon	1,699,277	-	25,112	106,008	1,830,397
DC Stefan	1,762,574	-	45,938	144,593	1,953,105
MJ Mphahlele	1,976,736	-	37,254	138,011	2,152,001
	13,829,069	**122,379**	**132,665**	**873,104**	**14,957,217**
MARCH 2015					
G Gray	1,977,756	-	14,627	140,385	2,132,768
N Bhuka	961,332	-	-	68,560	1,029,892
M Bikwani	1,136,580	50,943	-	88,697	1,276,220
N Buick	2,165,700	105,828	10,176	199,223	2,480,927
R Gordon	1,134,240	49,461	24,498	80,779	1,288,978
DC Stefan	818,952	-	9,174	75,242	903,368
MJ Mphahlele	942,180	-	6,794	66,893	1,015,867
	9,136,740	**206,232**	**65,269**	**719,779**	**10,128,020**

NOTES TO THE FINANCIAL STATEMENTS

35. PRIOR PERIOD ERRORS

DISTINCTION BETWEEN LAND AND BUILDINGS

In prior years SAMRC combined and accounted for Land and buildings as one asset class. As a result, the whole asset class has been depreciated. The depreciation of the Land component of this combined asset class is an error, as Land has an indefinite useful life and should not be depreciated.

In order to correct the error, the Land component is now being recognised and accounted for separately. Where the cost records to determine the split between Land and buildings cannot be established, the principles and guidance in Directive 7 has been used, and determined the fair value of the Land as at the beginning of the earliest period reported (1 April 2014), which has been used as deemed cost.

	2016
	R
The effect of depreciation is as follows:	
Cost/ deemed cost of land reclassified from building	1,738,558
Depreciation reversed- cumulative for the period up to the beginning of April 2014	124,485
Depreciation reversed - for the financial year 1 April 2014- 31 March 2015	17,364

CLASSIFICATION OF BIOLOGICAL ASSETS TO PROPERTY, PLANT AND EQUIPMENT

SAMRC has reviewed the classification of the animals held as Biological assets. The results of the review is that certain animals do not meet the definition of a biological asset as they are used for research purposes rather than agricultural activity. These animals, should therefore be classified as Property, plant and equipment.

The accounting treatment followed by the entity for Biological assets is to carry them at fair value less point-of-sale costs. The animals need to be depreciated over their estimated useful lives.

	2016
	R
The effect of the depreciation is as follows:	
Cost/ deemed cost of animals classified as Property, plant and equipment- April 2014	1,415,638
Depreciation - cumulative for the period up to the beginning of April 2014	(465,041)
Cost/ deemed cost of animals classified as Property, plant and equipment- March 2015	49,427
Depreciation - for the financial year 1 April 2014- 31 March 2015	(47,946)

NOTES TO THE FINANCIAL STATEMENTS

35. PRIOR PERIOD ERRORS (CONTINUED)

	NOTE(S)	AS PREVIOUSLY STATED R	CORRECTION OF ERRORS R	RESTATED R
The correction of the error(s) results in adjustments as follows:				
2015				
STATEMENT OF FINANCIAL POSITION				
Property, plant and equipment	9	110,920,050	1,093,927	112,013,977
Accumulated Surplus	17	242,124,322	1,093,927	243,218,249
DETAILED INCOME STATEMENT				
Other income		3,752,841	49,427	3,802,268
Depreciation and amortisation		18,022,167	30,582	18,052,749
Total revenue	18	693,221,688	49,427	693,271,115
Total expenditure		684,267,886	30,582	684,298,468
(Deficit) for the year		(3,767,376)	18,845	(3,748,531)
STATEMENT OF FINANCIAL PERFORMANCE				
Other income	19	8,128,215	49,427	8,177,642
Operating expenses		(697,720,724)	(30,582)	(697,751,306)
(Deficit) Surplus for the year		(3,767,376)	18,845	(3,748,531)
STATEMENT OF NET ASSETS				
Deficit for the period		(3,767,376)	18,845	(3,748,531)

NOTES TO THE FINANCIAL STATEMENTS

36. RISK MANAGEMENT

FINANCIAL 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.

The table below analyses the entity's financial liabilities and net-settled derivative financial liabilities into relevant maturity groupings based on the remaining period at the statement of financial position to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

	LESS THAN 1 YEAR	BETWEEN 1 AND 2 YEARS	BETWEEN 2 AND 5 YEARS	OVER 5 YEARS
	R	R	R	R
AT MARCH 31, 2016				
Trade and other payables	102,237,232	-	-	-
AT MARCH 31, 2015				
Trade and other payables	64,928,539	-	-	-

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.

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.

	AVERAGE EFFECTIVE INTEREST RATE	DUE IN LESS THAN A YEAR	DUE IN ONE TO TWO YEARS	DUE IN TWO AND MORE YEARS	2016	2015
	%	R	R	R	R	R
CASH FLOW INTEREST RATE RISK						
FINANCIAL INSTRUMENT						
Trade and other receivables - normal credit terms	10.50	13,223,965	-	-	13,223,965	26,230,026
Cash in current banking institutions	-	-	-	-	449,954,519	313,790,334
Trade and other payables - extended credit terms	10.50	102,237,232	-	-	102,237,232	64,928,539
Operating lease obligations	-	362,000	24,000	-	386,000	1,980,842

NOTES TO THE FINANCIAL STATEMENTS

36. RISK MANAGEMENT (CONTINUED)

INTEREST RATE SENSITIVITY ANALYSIS

The sensitivity analysis below has been determined based on financial instruments exposure to interest rates at reporting date. For floating rate instruments, the analysis is prepared assuming the amount of the instrument outstanding at the reporting date was outstanding for the whole year.

The basis points increases or decreases, as detailed in the table below, were determined by management and represent the management's assessment of the reasonably possible change in the interest rates.

A positive number below indicates an increase in surplus. A negative number below indicates a decrease in surplus.

The sensitivity analysis shows the reasonable expected change in the interest rate, either an increase or decrease in the interest rate percentage. The equal but opposite % adjustment to the interest rate would result in an equal but opposite effect on surplus and therefore has not been separately disclosed below.

As the entity does not have any instruments that effect net assets directly, the disclosure only indicates the effect of the change in interest rates on surplus.

There were no changes in the methods and assumptions used in preparing the sensitivity analysis from one year to the next.

Most of interest bearing financial instruments have fixed rates and no interest was expected for the following period based on historic events. Accordingly the sensitivity analysis below is based on items with a floating rate namely cash and cash equivalents.

	2016	2015 RESTATED*
	R	R
INCREASE IN INTEREST RATES		
The estimated increase in basis points - minimum	50	50
Effect on deficit/surplus	2,249,773	1,568,952
The estimated increase in basis points - maximum	200	200
Effect on deficit/surplus	8,999,090	6,275,807

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 and the four major banks with high credit standing.

Contract work constitutes the biggest 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 and Euro. Foreign exchange risk arises from future commercial transactions, recognised assets and liabilities and net investments in foreign operations.

Due to uncertainties in respect of when cash will be received from overseas, SAMRC does not hedge foreign exchange fluctuations.

Approximately 4% of SAMRC's debtors (R450,814) are exposed to currency compared to 24% last year (R1,740,687).

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 FINANCIAL STATEMENTS

	2016	2015 RESTATED*
	R	R

36. RISK MANAGEMENT (CONTINUED)

FOREIGN CURRENCY EXPOSURE AT STATEMENT OF FINANCIAL POSITION DATE

Exchange rates used for conversion of foreign items were:

USD	14.8820	12.2020
GBP	21.3906	18.0479
EURO	16.8911	13.1160

FAIR VALUES

At March 2016 and March 2015, the carrying amounts of cash, accounts receivable, accounts payable approximated their values due to the short term maturities of these assets and liabilities.

37. 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.

	2016	2015 RESTATED*
	R	R

38. FRUITLESS AND WASTEFUL EXPENDITURE

Opening balance	8,828	-
Fruitless and wasteful expenditure current year	13,799	69,508
Recovered and approved	(22,452)	(60,680)
	175	**8,828**

Expenditure relates to interest on creditor accounts, invoices were in dispute and was only paid once the queries were resolved. Interest on Telkom and municipal accounts have also been paid late due to the invoices not being received timeously, we have registered online and a number of municipal accounts are being received electronically, this should eliminate the risk of invoices not being received on time. An amount of R137 was incorrectly charged by the South African Revenue Services, the interest was paid in order to obtain a tax clearance certificate, this amount is not treated as fruitless and wasteful.

Interest on late payment as a result of the staff members not processing the invoice on time will be recovered from the individual staff member, an amount of R930 was recovered.

Fruitless and wasteful expenditure at 31 March 2016 was approved in May 2016.

NOTES TO THE FINANCIAL STATEMENTS

		2016	2015 RESTATED*
		R	R
39. IRREGULAR EXPENDITURE			
Opening balance		320,496	541,407
Add: Irregular Expenditure - current period		1,472,658	729,528
Less: Amounts condoned		(1,245,673)	(950,439)
		547,481	**320,496**
ANALYSIS OF EXPENDITURE AWAITING CONDONATION PER AGE CLASSIFICATION			
Current period		547,481	320,496
DETAILS OF IRREGULAR EXPENDITURE – CURRENT YEAR			
Non-compliance with Supply Chain Management Practices	National Treasury - TR 16A6.1 & TR 16A6.4 - SCM Practice note 8 of 2007/08; Paragraph 3.2.	39,520	15,229
	National Treasury - TR 16A6.1 & TR16A6.4 - SCM Practice note 8 of 2007/08; Paragraph 3.3.	1,433,138	714,299
	National Treasury - TR 16A6.1 & TR 16A6.4 - SCM Practice note 8 of 2007/08; Paragraph 3.4.	-	-
	SCM Practice note 7 of 2009/2010 and TR 16AS.3(a)(i)	-	-
	National Treasury - TR16A9.1(d) & Preferential Procurement Policy regulation 14	-	-
		1,472,658	**729,528**

DETAILS OF IRREGULAR EXPENDITURE CONDONED

At its meeting in May 2015; July 2015; November 2015 and February 2016 the Board condoned irregular expenditure of R2,400; R753,154; R309,208 and R180,911 respectively.

Irregular expenditure incurred for the period 1 January 2016 to 31 March 2016 is being submitted to the Board for condonation at the 30 May 2016 meeting. The bulk relates to the incorrect points system used for one tender awarded in 2014.

40. 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 the accounting authority and includes a note to the annual financial statements.

NOTES TO THE FINANCIAL STATEMENTS

40. DEVIATION FROM SUPPLY CHAIN MANAGEMENT REGULATIONS (CONTINUED)

All deviations were documented and submitted to the Accounting Authority or its delegate in terms of the Delegation of Authority Framework. Deviations were motivated in advance and subsequently approved.

41. PUBLIC FINANCE MANAGEMENT ACT (PFMA)

SECTION 55 (2)

No material losses through criminal conduct were incurred during the period ended 30 June 2015. Irregular and fruitless and wasteful expenditure incurred has been disclosed in notes 38 and 39.

SECTION 53 (3)

The Council may not accumulate surpluses unless written approval of the National Treasury has been obtained. Approval for the retention of the accumulated surplus as at 31 March 2015 was obtained from National Treasury.

SECTION 54 (2)

In terms of the PFMA and Treasury Regulation 28.1.5 the Council has developed and agreed to a framework of acceptable levels of materiality and significance.

42. BUDGET DIFFERENCES

MATERIAL DIFFERENCES BETWEEN BUDGET AND ACTUAL AMOUNTS

Efficiency savings were generated on infra-structural, communication and statutory costs, repairs and maintenance as well as printing and stationery costs which were lower than budget.

Increased prices resulting from the weakening of the exchange rate with major currencies resulted in expenditure on travel, information technology as well as laboratory operating expenses being over budget.

Collaborative research costs were lower than budget due to delays experienced in the finalisation of funding partnerships with foreign funders as well as the processes for the finalisation of the local grants taking longer than anticipated. Delays in the finalisation of partnerships with foreign partners has also resulted in the income from the rendering of services being lower than the budget..

Staff costs were lower than budget as a result of lower than anticipated contract staff expenditure. There is an overall reduction in contract staff employed year to date.

The budget did not include the reversal of bad debt provision and finance costs relating to income received in advance from funders.The amount budgeted for bad debts was not utilised.

Depreciation and amortisation were lower than anticipated.

Laboratory costs were higher than anticipated due to laboratory costs attributed to the HPRU NIH Clinical Trial Project and DDP funded contracts.

Other expenses were higher than budget as a result of higher than anticipated costs for advertising as well as unplanned conference and venue hire expenses.

Interest received was higher than budget due to the increase in interest rates and higher than anticipated average bank balances.

43. SERVICES IN- KIND

During the year under review the SAMRC's Environment & Health Research Unit utilised office space at the University of Johannesburg at no cost. The deemed fair rental value of the space is computed at R76,725 for the period.

In addition a staff member was seconded from Wits Health Consortium to the SAMRC to provide secretarial support to the President. The estimated annual value of this service is R304,000.

DETAILED INCOME STATEMENT

	NOTE(S)	2016 R	2015 RESTATED* R
REVENUE			
Income from contracts, grants and services rendered		302,448,665	275,887,835
Rental income		4,316,568	2,925,031
Other income		5,651,108	3,802,268
Interest received - investment		25,845,197	19,045,116
Dividends received		102,691	92,444
Government grants & subsidies		547,273,684	391,518,421
TOTAL REVENUE		**885,637,913**	**693,271,115**
EXPENDITURE			
Employee related costs	21	(283,153,337)	(277,231,098)
Depreciation and amortisation		(18,627,305)	(18,052,749)
Impairment loss/ Reversal of impairments	22	1,480,701	12,267,163
Finance costs	23	(1,294,175)	(1,370,197)
Lease rentals on operating lease		(4,800,490)	(4,718,587)
Debt Impairment	24	1,294,477	(1,840,637)
Repairs and maintenance		(14,304,129)	(12,579,327)
General Expenses	25	(502,646,100)	(380,773,036)
TOTAL EXPENDITURE		**(822,050,358)**	**(684,298,468)**
OPERATING SURPLUS	28	63,587,555	8,972,647
Loss on disposal of assets		(2,314,732)	(14,823,035)
Gain on foreign exchange		732,972	1,450,343
Fair value adjustments	26	(1,266,456)	651,514
		(2,848,216)	**(12,721,178)**
SURPLUS (DEFICIT) FOR THE YEAR		**60,739,339**	**(3,748,531)**

** See Note 35*

The supplementary information presented does not form part of the annual financial statements and is unaudited

LIST OF ABBREVIATIONS

ABV	Antiretroviral therapy, Bleomycin and Vincristine
ARIC	Audit, Risk and IT Committee
ART	Antiretroviral Therapy
ARV	Anti-Retroviral
BCM	Body Cell Mass
BMD	Bone Mineral Density
BMI	Body Mass Index
BODS	Burden of Disease Survey
CCMA	Commission for Conciliation Mediation and Arbitration
CDC	Centre for Disease Control
CDM	Clean Development Mechanism
CEO	Chief Executive Officer
CFO	Chief Finance Officer
CHC	Community Health Centre
CHW	Community Health Worker
COX	Cyclooxygenase
CRA	Comparative Risk Assessment
CRS	Clinical Research Site
CSG	Child Support Grant
CSRI	Council for Scientific and Industrial Research
CVD	Cardiovascular Disease
DH	District Hospital
DSM-5	Diagnostic and Statistical Manual
DST	Department of Science and Technology
EAP	Employee Assistance Programme
EE	Employment Equity
EDCTP	European Developing Countries Clinical Trials Partnership
EMC	Executive Management Committee
ERMU	Entity-wide Risk Management Unit
FFS	Fee for Service
GACD	Global Alliance for Chronic Disease
GBV	Gender-Based Violence
GCP	Good Clinical Practices
GIPD	Grant Innovation Product Development
GLP	Good Laboratory Practices
GPCR	G Protein-Coupled Receptor
GRAP	Generally Recognised Accounting Practice
LDL	Low Density Lipoprotein
HIV	Human Immunodeficiency Virus
HIVR4P	HIV Research for Prevention
HPV	Human Papilloma Virus
HLA	Human Leukocyte Antigen
HPCSA	Health Professional Council of South Africa
HPV	Human Papillomavirus
ICT	Information Communication Technology
I-R	Ischemia-Reperfusion
KMC	Kangaroo Mother Care
LRA	Labour Relations Act
MARP	Most at Risk Population
MIC	Minimal Inhibition Concentrations
MTB	Mycobacterium Tuberculosis
MDR TB	Multi Drug Resistant Tuberculosis
MTEF	Medium Tern Expenditure Framework
NCD	Non-Communicable Disease
NEHAWU	National Education Health and Allied Workers Union
NDoH	National department of Health
NDoST	National department of Science and Technology
NHI	National Health Insurance
NHRC	National Health Research Committee
NIH	National Institute for Health
NIAID	National Institute of Allergy and Infectious Diseases
NSDA	National Service Delivery Agreement
OSD	Occupational Specific Dispensation
PFMA	Public Finance Management Act
PHC	Public Health Clinic
PD	Pharmacodynamics
PK	Pharmacokinetics
PLWHA	People Living with HIV/Aids
PMTCT	Prevention of Mother to Child Transmission
PPIP	Perinatal Problem Identification Programme
POC	Point of Care
PSCBC	Public Service Coordinating Bargaining Council
SACENDU	South African Community Epidemiology Network on Drug Use
SCM	Supply Chain Management
SHIP	Strategic Health Innovation Partnership
STAT	Signal Transducer and Activator Transcription
SWEET	Study of Women Entering and in Endocrine Transition
TB	Tuberculosis
TESA	Trials of Excellence in Southern Africa
TENET	Tertiary Education and Research Network
TIA	Technology innovation Agency
US	United States
VCT	Voluntary Counselling and Testing
VF	Ventricular Fibrillation
VIPRU	Violence Injury and Peace Research Unit
VT	Venticular Tachycardia
WHO	World Health Organisation
XDR	Extensively Drug-resistant tuberculosis

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