

CELEBRATING
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FASTFACTS

Looking back on 50 years of innovation

1969  2019

1969

Establishment of the South African Medical Research Council at Scientia – a research centre 7 miles east of Pretoria. The Council consisted of the National Institute for Nutritional Diseases as well as 24 research units located across the country. The President was Prof. Andries Brink.

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1970

The MRC obtained membership of the Council for International Organisations of Medical Sciences (CIOMS).

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1971

29 September 1971 the administrative headquarters of the MRC in Parow in the Western Cape was officially inaugurated by the Minister of Health Carel de Wet.

MRC Coat of Arms registered with the Bureau of Heraldry of the Republic of South Africa.

The Pneumoconiosis Research Unit was expanded to become the National Research Unit for Occupational Diseases and a mobile laboratory was designed to do onsite testing for asbestosis in the cement manufacturing industry, and at motor assembly plants and carpentry shops.

The Molecular and Cellular Cardiology Research Unit was established.

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1972

Appointment of the first full-time Vice President Dr J. de V Lochner.

The President, Prof. Andries Brink, attended the 150th Anniversary of the French Academy of Medicine.

Ongoing field studies conducted to determine the incidence of tuberculosis as well as early identification and treatment.

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1973

Work began on the building of the National Research Institute for Nutritional Diseases.

New research units were formed – including the Liver Research Group at the University of Cape Town, the Research Unit for the Design of Catecholaminergic Drugs at the University of Potchefstroom and the Photobiology Research Unit at the University of Pretoria.

The MRC received a bequest of R170 000 from an anonymous donor.

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1974

The National Research Institute for Nutritional Diseases building was officially opened on 19 September 1974 by the Minister of Health S. W. van der Merwe.

Three new research groups and one unit established – the Research Group for the Diffuse Obstructive Pulmonary Syndrome and the Research Group for Clinical Cytology at the University of Stellenbosch; the Experimental Embriology Research Unit at the University of the Orange Free State and the Research Group for Organ Transplantation at the University of the Witwatersrand.

The National Biostatistical Research Centre was established.

Studies and fieldwork establishing the link between fungi in grain and the development of various diseases including liver cancer were undertaken.

An extensive study of Mseleni joint disease was concluded and results on the cause and treatment were shared with the government.

The Clinical Cytology Research Group undertook random cervical smears and found a high incidence of cervical cancer – one out of every 100 women in a provincial hospital.

The occurrence of a type of inherited porphyria was recognised and the index case identified.

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1975

Studies conducted in South West Africa on the incidence and risk of bilharzia.

Establishment of the Institute for Medical Literature and the MRC Unit for Electron Microscopy.

The first meeting of directors of institutes, units and groups held.

Prof. U. S. von Euler, 1970 winner of the Nobel Prize for Medicine was an official guest of the MRC.

Completion of detailed incidence studies of oesophageal cancer in the Transkei and definition of the demographic and environmental conditions associated with the disease.

Tuberculosis vaccination studies in children and the evaluation of new vaccination tools were completed.

Studies on organ rejection in liver transplantation continued.

Results of work on the ill effects of skin bleaching creams was published.

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1976

Study initiated to determine the status of nutritional knowledge in the general population and how this relates to the incidence of obesity and heart disease.

Technique developed for early diagnosis of cancer of the airways.

The Ischaemic Heart Disease Research Unit established at the University of Cape Town and the Research Institute for Diseases in a Tropical Environment was established in Durban.

An agreement signed between the MRC and the National Library of Medicine in Washington on 1 September 1976 gives the MRC access to the MEDLARS database.

Relationship between aflatoxin exposure and liver cancer established.

Studies on chronic obstructive lung disease in mine workers initiated.

Branch of the Institute for Biostatistics opened in Johannesburg.

Mapping of the geographical distribution of the intermediate snail hosts of bilharzia completed.

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1977

New technique developed by researchers at the Clinical Cytology Research Group to identify individual chromosomes – with application in gene mapping and tracing of gene inheritance.

The Photobiology Research Unit identifies a dominantly inherited skin disease – Oudshoorn Skin.

The MRC's high resolution scanning transmission electron microscope (STEM) is the first of its kind to be used in southern Africa.

Research defined the prevalence and distribution of various nutritional deficiency diseases in South Africa and made proposals for food fortification.

Two new units and one research group created – the Neurochemistry Research Unit at the University of Stellenbosch, the Human Ecogenetics Research Unit at the University of the Witwatersrand and the Dental Epidemiology Research Group at the University of Stellenbosch.

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The STEMLIT building was completed on the MRC Tygerberg Campus and officially opened by B. J. Vorster.

Pilot study on the risk factors for coronary heart disease initiated in the Western Cape.

Active tuberculosis case finding methods including house to house visits based on the MRC's work are incorporated into health department campaigns.

An agreement of scientific co-operation signed with the Israeli National Council for Research and Development.

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1979

Comprehensive review of oesophageal cancer studies completed.

Pilot studies on coronary heart disease risk factors in the Western Cape completed.

Four new research units established – the Muscle Research Unit and Biomembrane Research Unit at the University of Cape Town, the Circulation Research Unit at the University of the Witwatersrand and the Research Unit for Human Cellular Immunology at the South African Institute for Medical Research and the University of the Witwatersrand.

MRC's Ethical Code for research practice in South Africa published.

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1980

Extension of the MRC Head Office Building in Parow.

Public education campaign on coronary risk facts successfully launched in the Western Cape.

Tuberculosis Research Institute participates in two chemotherapeutic trials – one looking at the infectiousness of treated patients and the other at toxicity of drug combinations.

IBM 4331 computer installed at the Institute for Biostatistics.

Studies on iron fortification of food to reduce anaemia commenced in high risk populations.
Bilharzia Atlas published.

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1981

Major comparative study of severe mental illness in the different population groups in South Africa commenced by the Clinical Psychiatry Research Unit at the University of Cape Town.

Transplantation Research Unit develops an irradiation method which in animal models is able to produce tolerance to transplanted kidney and liver without immunosuppressive drug therapy.

A Scientific Publications Unit was established within the Institute for Medical Literature to improve scientific communication and undertake editing and publishing services.

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1982

Amendment of the MRC Act allows the appointment of a Deputy President, allows the MRC to do cross-border research and extends the Council to include non-medical members.

TB surveillance projects under way in most major towns in South Africa and ten years of surveillance completed in the Transkei.

Study of the clinical and biochemical features of non-insulin dependent diabetes in young people completed.

Evaluation trial of fluoride mouth rinses in children shows less cavities with fluoride use.

Pioneering work done by the Clinical Psychiatry Research Unit done in adapting and validating standard European and US instruments for diagnostic procedures and measures for use in different population groups.

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Establishment of the Research Institute for Accelerator Applications in Medicine.

Exchange agreement signed with the National Science Council of the Republic of China.

Several MRC units start to use recombinant DNA in their studies.

Epidemiological survey of the psychosocial, psychiatric and physical condition of non-institutionalised Coloured people in the Western Cape completed.

Guidelines established by the Iron and Red Cell Metabolism Unit for the preparation of soy-containing baby formulae to enhance iron absorption.

Study commenced on women with post-partum depression.

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1984

Research Unit for Human Cell Biology established at the University of Cape Town.

A survey on the leading causes of death among children under the age of 5 done by the Institute for Biostatistics shows differences among different population groups.

A defect in the insulin receptors of patients with diabetes is identified which helps to explain diabetes inheritance and prevalence in certain population groups.

Tuberculosis research Institute publishes a revised edition of the *World Atlas of Initial Drug Resistance* which monitors TB drug resistance.

The Maize Board undertakes follow up studies based on MRC work on fungal toxins in maize while the South African Bureau of Standards draws up standards for levels of fungal toxins in sorghum malt.

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1985

Magnetic Resonance Imager commissioned on 3 October 1985 as the first functioning unit in Africa.

Paediatric Mineral Metabolism Unit established at Baragwanath Hospital and the Research Unit for Regulatory Peptides established at the University of Cape Town.

In November 1985 the MRC announced further control methods to ensure the humane use of laboratory animals.

Two new Vice Presidents appointed – Dr Stephen Fellingham and Dr Bernard Slabbert.

Conference on Organ Transplantation held between China and South Africa.

The Emergent Pathogen Research Group publishes a book entitled *The Diagnosis and Treatment of Sexually Transmitted Diseases in South Africa*.

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1986

MRC publishes a report on intern training in South Africa which is taken up by the South African Medical and Dental Council.

Preclinical Diagnostic Chemistry Research Unit develops a sensitive and specific test based on human chorogonadotropin for the early detection of pregnancy.

The Research Institute for Diseases in a Tropical Environment develops a new radio-immunoassay for inexpensive malaria testing without laboratory facilities.

The Research Unit for Human Cellular Immunology develops an ELISA assay for diagnosing tuberculosis from serum samples.

MRC researchers invited to participate in the international project to map the human genome.

MRC's Computing Centre established.

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1987

Centre for Epidemiological Research in South Africa (CERSA) established.

AIDS Virus Research Unit established at the National Institute for Virology.

The MRC opened a branch laboratory of the Research Institute for Diseases in a Tropical Environment in Nelspruit.

The MRC's ethical code for research was extensively updated and published.

Liver research strengthened by the conversion of the Liver Research Group to a Centre.

The Forum for Radiation Protection established at the request of the Atomic Energy Corporation under the Chairmanship of Dr Philip van Heerden.

Research by the Research Institute for Diseases in Tropical Environment shows that there are at least ten strains of Plasmodium falciparum (the malaria parasite) in South Africa some of which are resistant to chloroquine (the anti-malarial drug).

Emergent Pathogen Research Group participates in a randomised controlled trial of a new typhoid vaccine involving over 11 000 children.

The Perinatal Mortality Research Unit established at the University of Stellenbosch.

The Muscle Research Unit worked out the cellular mechanisms for two mutations linked to familial hypercholesterolaemia.

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Two companies registered – Medical Technologies Investments (Pty) Ltd. And Medical Technologies Development (Pty) Ltd. (MEDTECH) launched to privatise the MRC's research output particularly with respect to the development and implementation of research products. The aim was to transfer technology from MRC supported research to private sector development and marketing.

The State President P.W. Botha opens the new MRC building in Pretoria housing the Research Institute for Environmental Diseases. The Tuberculosis Research Institute and the Pretoria branch of the Institute for Biostatistics.

An agreement is signed with the Chilean organisation responsible for medical research.

National symposia held on HIV/AIDS.

The Research Institute for Diseases in a Tropical Environment develops an amoebic gel diffusion test for diagnosing amoebiasis and an enzyme-linked immunosorbent (ELISA) assay for diagnosing cysticercosis.

CERSA initiates studies on aspects of urbanisation and health including establishing immunisation rates in recently urbanised populations.

The Liver Research Centre develops a method to accurately measure fibrin, fibrinogen and their degradation products which are linked to blood clot formation.

National Trauma Research Programme established.

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1989

January 1989 – Dr Philip van Heerden takes over as President.

First scientific seminar held with scientists from the Transkei.

The Bioenergetics of Exercise Research Unit was opened at the University of Cape Town with Prof. Tim Noakes as director as well as the Research Unit for the Study of Phagocyte Function at the University of Pretoria with Prof. Ron Anderson as director.

Study completed on the impact of acute respiratory tract infections on infant mortality.

The Research Institute for Diseases in a Tropical Environment undertakes studies on the use of DDT to control malaria mosquitoes in KwaZulu-Natal – in particular investigating the effects of DDT on breastfeeding infants.

Isolation techniques for HIV-1 and HIV-2 viruses developed and perfected by the AIDS Virus Research Unit.

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1990

Pilot education programmes on preventing HIV/AIDS launched at secondary schools.

The AIDS Virus Research Unit develops an immunoblot test as confirmatory test for HIV serodiagnosis.

Programme commenced to monitor TB treatment compliance.

A sensitive PCR assay is developed to detect *M. tuberculosis* which gives a much speedier result than culture techniques.

CERSA undertakes a study on missed opportunities for measles immunisation.

The MRC and the University of Cape Town complete the BRISK study which determined risk factor profiles for heart disease among black people in the Western Cape. This was the last in a series of investigations in which the risk factor profiles of all the population groups were determined.

MRC researchers identify risk factors for the development of osteoporosis including low body weight, smoking, alcohol consumption, fair skin, lack of exercise and family history.

The Trauma Research Programme undertakes the first comprehensive analysis of trauma for a metropolitan area on the African continent.

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1991

New MRC Act passed and restructuring of the Executive Management Committee undertaken.

Move away from obsolete institute structure to a more flexible programme structure in which not only its own research projects, but also those of its partners at academic institutions, are embodied. In practise, the more basic projects will usually be carried out at the academic institutions while more community-orientated projects, which are epidemiological in nature, will mainly be handled by the MRC's own structures.

Priority areas identified were: TB, Malaria, Nutrition Intervention, Trauma, AIDS and Urbanisation.

Affirmative action prioritised.

Transfer of the Delft Animal Centre from the Cape Provincial Administration to the MRC.

MRC conference facility was completed

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1992

Retirement of President Dr PDR van Heerden on 31 Dec 1992.

Retrenchment and early retirement of about 21% of staff members, mainly in support services.

Implementation of three-pronged research strategy – the main thrusts are Essential Health Research, Strategic Health Research and Technology Development and Transfer.

Affirmative action was implemented formally as an employment policy.

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1993

Appointment of new President, Prof OW Prozesky as of 1 January 1993.

Recognition that the MRC's efforts to generate income via Medical Technologies (Pty) Ltd, a company for technology development in the open market was not financially viable (company subsequently liquidated) resulting in severance packages offered to several staff.

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1994/5

25th Jubilee year.

New Government entailed major changes in governance of the MRC. A new Ministry of Arts, Culture, Science & Technology was created to take responsibility for the family of Science Councils.

Appointment of new Board with Prof. Malegapuru Makgoba – the first Black African – as chair.

Creation of Research Capacity Development Group to address corrective action.

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1995/6

Corporate plan for 3 years (1995 – 1997) was drawn up.

Establishment of a Scientific Strategy Committee to manage scientific activities of the MRC at an operational level.

Establishment of new collaborative research unit at the South African Institute for Medical Research and University of Witwatersrand School of Pathology on pneumococcal diseases.

Establishment of MRC's first collaborative research unit at a historically black university (MEDUNSA) on diarrhoeal diseases.

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1996/7

Development of a more business-like approach to research, making it more problem-oriented and useful.

Medical Biophysics Research Programme closed down.

Establishment of MRC's Traditional Medicines Research Group in collaboration with the Universities of the Western Cape and of Cape Town.

Publication of MRC Policy Briefs for decision makers and health professionals.

Research findings had direct implications on anti-smoking legislation and recommendations on Vitamin A supplementation for children.

Establishment of the SA Cochrane Centre.

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1997/8

First Science Council to achieve a fully transformed Board.

Fast tracking of black employees was introduced.

A Scientific Strategy Committee (SSC) was formed to assist the Board and EMC in planning detailed research strategy.

The MRC developed a formal process to coordinate market and business development. This led to several new initiatives such as:

- Traditional medicines research
- Health informatics research
- HIVnet vaccine programme against AIDS
- Establishment of a drug trial division
- Environmental health impact studies
- Crime and violence research

First SETI review in November. Noted that the MRC is a national asset which is being successfully transformed to discharge its responsibilities and functions.

Establishment of 7 new Units at universities:

- MRC/CANSA Oesophageal Cancer Research Group
- MRC Research Unit for Maternal and Infant Health Care Strategies
- MRC Genital Ulcer Disease Research Unit
- MRC Cape Heart Research Group
- MRC Research Unit on Anxiety and Stress Disorders
- MRC Research Group on Health Policy
- MRC Bone Research Unit

Development of core competency clusters:

- Health and biomedical research and development
- Health research facilitation and management
- Health research capacity development for innovation
- Health information and knowledge management
- Facilitate innovation and technology transfer in health

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1998/9

Budget for 1998-99 has for the first time exceeded R100 million.

New Board appointed.

Prof. Makgoba appointed successor to Dr Prozesky in October 1998.

30th year of MRC.

Establishment of SAAVI

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1999/2000

Recognised its programme into six clusters:

- Environment and development
- Health systems and policy
- Infection and immunity
- Molecules to disease
- Non-communicable diseases
- Women and child health

Prof. Valerie Mizrahi – first female to head an MRC Unit.

Celebration of 30th anniversary.

First time in its 30th history that awards made to black scientists.

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2000/1

Second SETI Review conducted in April 2001.

Three units in the field of genomics and bio-informatics established:

- Human Genetics Research Unit
- Human Genomic Diversity and Disease Research Unit
- Bioinformatics Capacity Development Research Unit

MRC launched an indigenous knowledge (IKS) programme in June 2000.

New logo launched.

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2001/2

2001 SETI Review describes MRC as “a national asset to South African Society”.

SAAVI researcher Carolyn Williamson awarded the World Technology Forum Award for Biotechnology for her work on an HIV vaccine construct.

Office of Indigenous Knowledge Systems established.

The SA HealthInfo knowledge network is expanded to include a dedicated portal for HIV/AIDS information – AfroAIDSInfo.

Two software programs – Foodfund2 and Foodfinder2 – launched which contain food composition data from the Food Composition Tables from 1981.

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2002/3

Eskom donates R75 million to SAAVI.

First two phase 1 HIV vaccine clinical trials commence.

Traditional Medicines Database (TRAMED III) consolidated and incorporated into the National Health Knowledge Network.

Umbiflow Doppler Ultrasound System tested in community health centres in the Western Cape. The Umbiflow was also awarded the NACI 'Most Outstanding Innovation of the Year' Award at the Technology Top 100 Awards.

Essential Health Technology Package developed to strengthen resource planning and technology management in health care.

The South African Cochrane Centre was commissioned by the WHO to develop an evidence-based reproductive health care training programme for healthcare workers.

Study on the accessibility and quality of HIV/AIDS care and support in 50 randomly selected clinics in Gauteng completed and finds inadequate infrastructure for the needs of people with HIV/AIDS.

Respiratory and Meningeal Pathogens Research Unit evaluates a vaccine against pneumonia and meningitis in Soweto. The results show that the vaccine protects against 85% of invasive disease due to vaccine serotypes, reduces antibiotic-resistant pneumococcal disease by 58% and reduces episodes of pneumonia by 32%.

Lubombo Spatial Development Initiative on malaria control received funding for 5 years from the Global Fund.

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2004

National Programme for Research on AIDS (NAPRA) established.

Creation of the Cancer Research Initiative in South Africa (CaRISA).

Transformation Task Team established to develop a strategy for transformation and research development.

MRC selected as host institution for the European Developing Countries Clinical Trials Partnership (EDCTP).

Health and Development Research Group completes a study of blood lead concentrations in a national cross section of first-grade school learners and finds levels in a range associated with reductions in IQ, hyperactivity and inability to concentrate.

National survey completed to determine the extent of drug resistant TB, in particular multi-drug resistant TB.

Phase one study of the microbicide Carraguard among HIV-positive women completed.

Human Genetics Research Unit localised two new genes for *retinitis pigmentosa*.

Low-cost baby porridge fortified with iron, zinc and beta carotene developed by the Nutritional Intervention Research Unit.

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2005

Work by the Health and Development Research Group on the lead content of children's toys and art equipment leads to a ban on the use of lead in paint used for the general public.

Burden of Disease Unit begins to quantify the contribution of 17 selected risk factors to the national burden of disease.

The South African Cochrane Centre received funding to start a research synthesis training programme for participants from the sub-Saharan region.

EDCTP funding granted to the South African Cochrane Centre to start an HIV/AIDS, TB and Malaria clinical trial registry.

UN World Drug Report singles out South Africa as the country with the most systematic means of collecting data on drug abuse.

Charter for Physical Activity and Sport for Children and Youth in South Africa release.

South Africa becomes the first developing country to run multiple phase one vaccine trials and also first in the world to test a subtype C HIV-1 vaccine.

MRC Centre for Molecular and Cellular Biology develops new techniques to reduce time of diagnosis of MDR-TB.

The Human Genomic Diversity and Disease Research Unit participates in the MNet documentary *So, where do we come from?*

Intellectual property audit of the MRC undertaken.

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2005/6

South African Drug Enforcement Handbook launched.

First Youth Risk Behaviour Survey completed.

Studies on the salt content of foods influence government food-labelling regulations.

First phase II HIV vaccine trial commences as well as a phase II therapeutic trial.

Gender and Health Research Group undertakes large-scale project examining the factors associated with rape in South Africa.

Nutritional Intervention Research Unit studies the link between omega-3 fatty acids and mental abilities in school children.

Studies on the orange-fleshed sweet potato show that it provides two-and-a-half times the recommended dietary allowance of vitamin A for 4 to 8 year olds.

CARISA (the Cancer Research Initiative of South Africa) established by CANSA and the MRC.

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2006/7

The Phambili Phase IIb proof of concept HIV vaccine clinical trial launched in 2007.

Prof. Lionel Opie of the Inter-university Cape Heart Group awarded the Order of Mapangubwe in 2006 by President Thabo Mbeki in acknowledgement of his contributions to cardiology research.

Studies demonstrate the long-term level of protection afforded by the Hib vaccine in HIV-infected children.

The Airborne Infection Research Facility was launched to study the transmission dynamics of MDR/XDR TB in biological models.

Work in the Lubombo Spatial Development corridor in reducing malaria prevalence by 88% leads WHO to recommend indoor spraying with DDT in malaria endemic regions.

As of March 2007 fourphase I and four phase II and IIb HIV vaccine trials under way in the country.

That's It project offering integrated HIV and TB care is rolled out.

Prof. Valerie Mizrahi wins the DST Distinguished Women Scientist Award for 2006 as well as the Shopright/Checkers/SABC 2 Woman of the Year Award in the category of science and technology.

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2007/8

South African Comparative Risk Assessment study completed by the Burden of Disease Research Unit shows that unsafe sex leading to sexually transmitted infections, interpersonal violence, hypertension, smoking, diabetes, obesity, unsafe water and sanitation and indoor air pollution are all significant risk factors in South Africa.

e-Health research platform launched in 2007.

Partnership between the HIV Prevention Research Unit and Aurum Health leads to the establishment of treatment and care clinics at research sites.

Phambili vaccine trial terminated as data from a companion study shows candidate vaccine does not prevent infection and may be linked to increased susceptibility.

US Food and Drug Administration (FDA) approval granted in 2007 for two South African developed HIV vaccines for clinical trials.

Link between hepatitis B infection and liver cancer established in black South Africans leading to increased awareness about the importance of immunisation against the virus.

Oncology Research Unit established.

Members of the Health Policy Research Group make presentations to the South African Human Rights Commission Public Enquiry into Health Care Services.

Maternal and Child Health Integration Programme initiated – aimed at integrating maternal, neonatal and child health at the district health level.

The Lancet lists the SAMRC as one of the leading health research organisations in the world.

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2009/10

MRC studies lead to the introduction of a rotavirus vaccine and 7-valent pneumococcal vaccine to the Expanded Programme in Immunisation in South Africa.

EDCTP Trials of Excellence programme launched at the Clinical and Biomedical TB Research Unit.

MRC/UCT Drug Discovery and Development Research Unit established.

Research undertaken to understand and support post-exposure prophylaxis use after rape.

Results of the PRO2000 Buffer gel microbicide trial show no effect on preventing HIV.

Phase I trials of two South African developed HIV vaccines – SAAVI-MVA-C and SAAVI DNA-C2 – completed.

MRC researchers contribute to a Lancet Special Edition on *Health in South Africa*.

Systematic review conducted by the South African Cochrane Centre shows that male circumcision in heterosexual males reduces the risk of acquiring HIV by 54% over a two-year period compared with uncircumcised males. This review also wins the Cochrane Collaboration Kenneth Warren prize which recognises a review of high methodological quality and importance to resource-constrained settings.

Second National Burden of Disease Study undertaken

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2011/12

The South African government signed the Bamako Accord, which commits the Department of Health to spend 2% of the health budget on health research.

The MRC participates in the Health Research Summit held by the National Health Research Committee in 2011. The Summit together with previous policy statements sets clear guidelines for the research priorities in South Africa.

MRC researchers evaluate the effectiveness of the national PMTCT programme showing that HIV transmission decreased from 3.5% in 2010 to 2.7% in 2011.

TB researchers collaborate on a study of smear-negative HIV-TB co-infected patients that assessed the effect of the 2007 WHO treatment guidelines. A recommendation was made to the National Department of Health to implement the guidelines.

MRC partners with the global effort to develop a new drug for TB treatment. The drug is called Bedaquiline (TMC207), which has a novel mechanism of action and potent activity against drug-sensitive and drug-resistant TB.

SAAVI coordinates the development of a National HIV Vaccine Plan for South Africa.

The Gender and Health Research Unit extends understanding of rape perpetration. Their research showed that almost 20% of women have experienced forced sex while their research on approaches to dealing with gender-based violence serve as the basis for WHO policy and were published in The Lancet and Science.

A 5-year vaccine trial conducted in Soweto with 39 876 children shows that the 9-valent pneumococcal conjugate vaccine (PCV) reduced the burden of invasive disease due to vaccine serotypes by 85%, and was also efficacious in HIV-infected children. A National Catch-up Drive starts in February 2012. SA becomes the only African country self-funding PCV for its children.

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2012/13

President Zuma acknowledges the MRC's research contributions in AIDS in his 2013 Annual State of the Nation address.

The Rapid Mortality Surveillance Report highlights that the average life expectancy at birth in South Africa increased from 56.5 years in 2009 to 60.0 years in 2011. This is unprecedented globally. Deaths of children under five years of age dropped from 56 per 1 000 live births in 2009 to 42 per 1 000 live births in 2011 and deaths of babies below one year of age dropped from 40 per 1 000 live births in 2009 to 30 per 1 000 live births in 2011. These achievements are largely credited to the government's antiretroviral treatment scale up.

MRC research shows that ARV prophylaxis and treatment of mothers reduced mother-to-child transmission of HIV from 3.5% in 2010 to 2.7% in 2011 in South Africa.

The Oncology Research Unit finds that assays of certain phytomedicines demonstrated greater toxicity to colon, breast, prostate and pancreatic cell lines by enhancing programmed cell death. Combined use of these with chemotherapy drugs can enhance the effect of these drugs on tumour cells resulting in smaller doses needing to be administered, and thus reducing potential chemotherapy-related side-effects.

The first nationally representative psychiatric epidemiology survey shows that the presence of severe depression or anxiety disorders was associated with a significant reduction in earnings. The estimated lost income associated with these conditions was \$4 798 per adult year while projections of the total annual cost due to South Africans living with these conditions were \$3.6 billion. The findings of this study support the economic argument for investing in mental health care.

The Maternal and Infant Health Care Strategies Research Unit conduct a survey to assess the ability of health-care facilities to provide adequate emergency obstetric care against international standards. This first-such assessment highlights the need to substantially improve these services.

The Respiratory and Meningeal Pathogens Research Unit, with international collaborators, identifies the genetic origin of penicillin resistance in the most important cause of pneumonia mortality in South Africa, the pneumococcus. The Unit also demonstrates the utility of a rapid test for detecting pneumococcal colonisation density to diagnose pneumococcal pneumonia.

Risk factors for neonatal sepsis and perinatal death among South African infants identified. This will allow early identification and timeous intervention of newborns at risk.

The Medical Imaging Research Unit develops a new method and devices to non-invasively acquire deep muscle electromyograms (EMG). This allows for deep muscle EMG acquisition without the need for invasive needle or fine-wire electrodes.

In August 2012, a detailed internal assessment of the MRC is released and contains recommendations for revitalisation. The report highlights the organisation's strengths in research, but also problems including a declining scientific stature, a potential to achieve greater impact in improving health in South Africa and severely constrained government funding.

SAMRC scientists contribute to the new global burden of disease estimates published in the Lancet.

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2013/14

The South African–US Program for Collaborative Biomedical Research is established.

The Environment and Health Research Unit undertakes a study of mercury exposure in newborns.

Despite the removal of lead from petrol, MRC studies show that overall children’s blood lead levels in urban South Africa remained high (median 7.0 μ g/dL, range 0.8–32.3), as compared to the US Centers for Disease Control and Prevention recommended reference level of 5 μ g/dL. Urgent attention to this public health problem is recommended.

SAMRC’s researchers publish new insights on the worldwide prevalence of sexual violence and non-partner rape which bring new global media attention to the problem by being featured in the New York Times and BBC News. The World Health Organization commences the development of international guidelines.

SAMRC publishes research on validating models for predicting type-2 diabetes in the Lancet (Diabetes and Endocrinology).

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2014/15

The MRC appoints Prof. Glenda Gray as the first woman president.

The MRC hosts the National Health Scholarship Programme, an initiative of the Department of Health and the Public Health Enhancement Fund to train MD/PHDs to improve clinical research in South Africa.

Magnetic resonance imaging in children (age 6-7) shows damage to cognitive function in children exposed prenatally to methamphetamine.

Recruitment commences for the Soweto First 1000 days cohort which aims to understand the complexity between multiple maternal factors and fetal and infant outcomes, and identify the levers that could optimise maternal and child health within the first 1000 days within an urban-poor African context.

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 (ASPIRE) is undertaken in women.

The first report of the association of human HLA types and M.tuberculosis strain genotype is published, highlighting that both host and pathogen genetics need to be considered when studying TB disease development.

A Cochrane review on task shifting in HIV care finds that if nurses are trained and supported to deliver ART, they are as good as doctors.

A new treatment is developed in which antibodies that neutralise PCSK9 prevent the effect of PCSK9 that degrades the LDL receptor. This treatment can be effective in some patients with homozygous familial hypercholesterolaemia.

Findings demonstrate that cervical cancer is a risk factor for contracting HIV, since the levels of the receptors that enable HIV infection are higher in cervical cancer tissue.

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2015/16

Five-country research study comprising Canada, India, Brazil, China and South Africa commences to address child obesity.

Programme for increased funding to historically under-resourced tertiary institutions starts. This project, implemented over five years, will see investment in excess of R30 million to the universities of Fort Hare, Walter Sisulu, Limpopo, Venda and Sefako Makgatho.

Six new funding grants for TB research announced. Together with the UK MRC, the R70 million funding opportunity, provided by the Newton Fund, will support TB-control implementation science. The collaboration has also been expanded to include non-communicable diseases.

Bi-lateral agreement is signed between Sweden and South Africa which brings together scientists to respond to funding calls relating to health inequalities, health systems and health systems policies.

A dedicated Transformation Forum is established to achieve new targets for the organisation.

Study shows that the prevalence of many cardiovascular (CVD) risk factors in 2008/09 was substantially higher than in 1990. This highlights the need for better prevention and control measures.

The SAMRC commences 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).

The 2nd SA National Burden of Disease study reports South Africa's successes in population health including reducing mortality from HIV/AIDS, and overall child mortality and injuries. However, the data highlight high mortality with a considerable burden attributed to non-communicable diseases and a concerning rise in mortality from diabetes, renal disease, prostate and breast cancer.

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2016/17

In 2017 an agreement was signed between the SAMRC and Beijing Genomics Institute to establish the first Genomics Sequencing Facility in Africa – the African Genomics Centre.

A Memorandum of Understanding (MoU) signed with Novartis and the South African Department of Science and Technology to formalise Novartis' ongoing investment in developing South African research capabilities, scientific cooperation and collaboration for capacity building and innovation.

SAMRC partnership with Healthy Life Trajectories Initiative sets to promote research cooperation in Canada, China, India and Brazil.

MRC funding by the SAMRC for a national licence for the Cochrane Library, which went operational on 1 June 2017. South Africa was the first country outside Western Europe, North America and Australia to procure a national licence. The Cochrane African Network Is also increasing and promoting the use of evidence-based healthcare in Africa.

In 2016, SAMRC introduced a five-year initiative aimed at strengthening research capacity development at selected South African universities that previously did not have access to adequate resources – R8 million invested.