

MEDICAL RESEARCH COUNCIL OF SOUTH AFRICA

MEDICAL RESEARCH EXCELLENCE



SA Medical Research Council Scientific Awards

In his address to MRC award and grant winners at a prestigious ceremony in Cape Town, outgoing MRC Chairperson

Professor Lizo Mazwai described the South African Medical Research Council (MRC) as “richer, more focused, more efficient and better placed to deliver a healthy nation through research.”

The MRC conferred Platinum, Gold and Silver medals to scientists who are dedicated to research that ultimately seeks to improve health in South Africa. “The awards are the highest honour in medical research in this country. The MRC acknowledged great South African researchers with awards as a testimony to their eminent contributions to global health and well-being”, said Professor Salim Abdool Karim, President of the MRC.

The MRC Platinum medal is a Lifetime Achievement Award for outstanding scientists who have raised the profile of South African science and helped build the foundations of health research in the country for future generations. These are awards for South Africa’s most accomplished scientists who have several hundred publications in leading international journals and have sustained a major influence in their fields.

The 2013 recipients of the MRC Platinum medals are two internationally renowned South African clinical scientists, Professor Shabir Madhi and Professor Eric Bateman, both of whom have made major contribu-



MRC President Professor Salim Abdool Karim with Platinum medal winners Professor Shabir Madhi (Left) and Professor Eric Bateman (Right).

tions to medical research nationally and globally.

Professor Madhi, Director of the National Institute for Communicable Diseases in Johannesburg, is a leading scientist in pneumococcal vaccines for the prevention of pneumonia and rotavirus, a major cause of diarrhoea in children. His research has contributed to the WHO promoting the im-

plementation of these vaccines to improve child health.

Professor Bateman, a clinician scientist from the University of Cape Town, received the award for his research in the field of pulmonology, where he has studied asthma and chronic obstructive pulmonary disease, two of the major causes of ill-health and death in adults.

The MRC Gold medal was awarded in recognition for ground-breaking scientific contributions that have impacted on health. Professor Andre Pascal Kengne, Director of the MRC’s Non-Communicable Diseases Research Unit, received the medal for his contribution to improving the understanding, quantification and reduction of cardiovascular disease risk in people with diabetes. Professor Keertan Dheda received the award for his contributions to the clinical management of TB, especially drug resistant TB.

The MRC President’s medal was awarded to Professor Malegapuru William Makgoba for his exceptional contribution to scientific excellence.

Silver medals were awarded to up-and-coming scientists who have made important scientific contributions within 10 years of having been awarded their PhD or MBChB/dental equivalent. Dr Tanya Doherty, Professor Naeemah Abrahams, Professor Graeme Meintjies and Professor Kelly Chibale were recipients of this award.

Collectively, these scientists and the others who received MRC awards have had a major impact on health and health research in South Africa and, indeed, the world.



MRC AWARD WINNERS

FROM LEFT TO RIGHT: Professor Naeemah Abrahams is Senior Specialist Scientist at the Gender and Health Research Unit MRC (Silver Medal); Professor Keertan Dheda is Head of the Division of Pulmonology, Department of Medicine at UCT and at Groote Schuur Hospital (Gold Medal); Professor Andre Kenge is Director of the Non-Communicable Diseases Research Unit MRC (Gold Medal);

Professor Shabir Madhi is Director at the National Institute for Non-Communicable Diseases and Director of the WITS/MRC Respiratory and Meningeal Pathogens Research Unit, (Platinum Medal); Emeritus Professor Eric Bateman is Director at UCT Lung Institute, and honorary consultant at the Division of Pulmonology at UCT (Platinum Medal); Professor Graeme Meintjies is Associate Professor in the Department of Medicine and a member of Institute of Infectious Disease and Molecular Medicine (IIDMM) at UCT (Silver Medal); Dr Tanya Doherty is Senior Specialist Scientist at the MRC’s Health Systems Research Unit (Silver Medal); Professor Paul Van Helden is Head of the Division of Molecular Biology and Human Genetics at Stellenbosch University (Silver Medal conferred in 2004); Professor Malegapuru William Makgoba is Vice-Chancellor and Principal of the University of KwaZulu-Natal (MRC President’s Award).

CHARTING A NEW PATH FOR MEDICAL RESEARCH IN SOUTH AFRICA



Revitalised Medical Research Council set to reduce ill-health in South Africa

A revitalized, better-funded and more efficient South African Medical Research Council, (MRC), has taken a leap forward to impact on our country's most common causes of ill-health and death. Its latest investment of R190million for Flagship Projects at Universities and the MRC, highlights its research-to-practice projects which look set to save tens of thousands of lives. "The MRC is firmly on the path to providing new knowledge for a healthier South Africa," said Professor Salim Abdool Karim, President of the MRC.

After several years of declining funding available for research, the MRC has now emerged with new vigour and substantial new funding to regain South Africa's status as a world leader in medical research. Thanks to the National Treasury's Economic Competitiveness and Support Package, the MRC has been able to raise the stature and competitiveness of South African medical research. With these resources, the MRC has over the past 18 months, developed a strategically-aligned focus on high quality science aimed at "Improving the Health of the Nation".

Major new MRC research findings in 2013

The MRC's scientific achievements in 2013 bear testimony that the organisation has indeed taken a leap forward in impacting local and global policy.

- The World Health Organisation's (WHO) guidelines on intimate partner violence draw extensively upon the MRC's Gender and Health Research Unit's research into preventing violence against women and girls, including the unit's findings published recently in scientific journals, *The Lancet* and *Science*.
- 23% fewer South African babies were born with HIV in 2011 compared to 2010, according to a large national survey of HIV positive pregnant women and their newborn babies undertaken by the MRC's Health Systems Research Unit and presented at the International AIDS Conference in Washington, USA.

- HIV prevention is given a boost when HIV testing is offered in the home, according to a study in rural KwaZulu-Natal undertaken by the MRC's Health Systems Research Unit and published in the *British Medical Journal*.
- In his State-of-the-Nation speech, President Zuma quoted the MRC's recent analysis, from *The Lancet*, that found that life expectancy in South Africa has increased by about 10% over the last few years. This study, conducted by the MRC's Burden of Disease unit, demonstrated the clear survival benefits of the current policies on AIDS treatment.

These latest research findings by MRC scientists and their impact on health policy and practice epitomise the country's leadership in medical research and have set a benchmark for scientific excellence in South Africa.

Developing new treatments and vaccines

To develop new drugs, diagnostics and vaccines, the MRC has created a new initiative known as SHIP (Strategic Health Innovation Partnerships). With close to R300 million available to SHIP over the next 3 years, it is funding several new projects focusing on developing an AIDS vaccine, new treatments for TB, especially drug-resistant TB and new drug treatments for malaria.

MRC focuses on South Africa's burden of disease

While SHIP focuses on the development of vaccines and drugs, the rest of the MRC's in-house research units focus on the top ten causes of death in South Africa. The MRC's intramural research has been consolidated into 11 large research units including research on HIV, TB, Burden of Disease, Chronic Diseases, Alcohol and Drug Abuse and Women's Health. "The MRC must become a world class medical research institution," says Health Minister Dr Aaron Mokoaleli. "However, not all research must and should be done at the MRC. The MRC must also partner with and develop centres of excellence outside itself."

“ We've put South Africa firmly back on the health research map. Local funding for medical research has doubled this year ”

Professor Salim S Abdool Karim

Partnering with South African Universities

Scientific excellence is being supported at our country's Universities with new vigour. The MRC currently funds more than 20 research units at Universities across the country. These units conduct research in TB, Cardiovascular Disease, Infectious Disease, Cancer, Public Health, Women and Maternal Health, Brain Behaviour, Genomics and Proteomics, Environmental Health and Traditional Medicines. Another category of funding from the MRC is "Self-Initiated Research Grants", which are well suited to first time investigators to provide them with funding for investigator-initiated research at Universities.

A new initiative to fund the best research at medical schools and health science faculties has rapidly gained momentum over the past 18 months with the formation of flagship projects. Flagship projects, which are interdisciplinary in scope, are an institution's highest impact and most prestigious research project. In 2013, twelve universities were awarded Flagship project grants worth a total of R150 million. The availability of this new funding for local universities creates an opportunity to encourage young scientists to become involved in conducting ground breaking research that can potentially impact on health policy. "We've put South Africa firmly back on the health research map. Funding for medical research at Universities has trebled this year," says Professor Abdool Karim

Rewarding Excellence

In order to recognize and acknowledge scientific excellence in health research, the council revived the MRC Merit Awards at a prestigious ceremony in October 2013. Platinum Medals are being awarded for a lifetime of exemplary scientific achievement, with seminal contributions that have impacted health, especially for people living in developing countries. Gold Medals are being awarded for major scientific breakthroughs while Silver Medals are for recent post-doctoral researchers who have made a major scientific contribution. At the discretion of the MRC President, special awards can also be conferred for exceptional contributions to medical research in South Africa. The awards are among South Africa's most prestigious.

Scholarships

The development of young researchers is fundamental to the future of science in South Africa. As the custodian of health research in South Africa, the MRC has developed a range of training Fellowships, for masters degrees, doctoral degrees and post-doctoral fellowships specifically in the field of health research. There is a particularly strong focus on competitive scholarship funding for clinical research through the new MRC Clinician Researcher Programme offering eligible candidates a R500 000 fellowship per annum. In addition, the MRC administers a Clinical Scholars Programme for the National Health Research Committee.

New leadership for new opportunities

The Minister of Health appointed a new Board of the MRC effective from November 2013. Members of the Board will serve a 3-year term under the leadership of newly appointed Board Chair, Professor Machaba Michael Sathekge. The previous Board oversaw the MRC's revitalisation while the newly appointed Board will need to oversee the process of consolidating the gains in the MRC.

The Board's first order of business will be the appointment of the next MRC President to take over from Professor Abdool Karim, when he returns to his research at CAPRISA in Durban in April 2014. Since the government allocation to the MRC has increased 80% over the last 2 years during Professor Abdool Karim's tenure, the organisation is well positioned with new funds to drive the rejuvenation of medical research in South Africa. These new resources will create the new impetus need for medical research in South Africa laying the foundation for the researchers to use the new information and knowledge to build a healthy nation.



R190 MILLION FOR HIGH IMPACT MEDICAL RESEARCH FLAGSHIP PROJECTS

The MRC has established a new high-profile funding opportunity for Medical Schools and Universities to undertake "Flagship Projects" aimed at addressing South Africa's key health problems. The winning projects, led by some of South Africa's most accomplished scientists, were announced by the MRC in Cape Town.

The introduction of these high impact flagship projects to undertake large scale projects comes after National Treasury provided funding to the MRC under its Economic Competitiveness and Support Package to support the rejuvenation of medical research in South Africa.

A total of R150 million, over three years, has been granted to twelve projects at Universities across the country whilst five MRC intramural projects have been granted R40 million over the same period. All seventeen of these projects address the health priorities of the nation and aim to place South African medical

research and innovation at the highest platform globally.

"These flagship projects are inter-disciplinary in scope, they address the most important health problems and provide hope that South Africa is well positioned to generate new knowledge for better health," said MRC President Professor Salim Abdool Karim. "They are essentially big ideas, big science for big impact!" he added.

The MRC received 29 applications for Flagship projects from 18 Universities. The applications were then subjected to rigorous international peer-review, which led to 12 of the Universities (66%) being

successful. About two out of every five applications (about 40%) were successful, indicating just how competitive it is to get one of these grants. The grants provide about R16million for a large project and R8million for a moderately large research project.

The research programme areas of these flagship projects cover a wide number of disease areas including HIV, Tuberculosis, Malaria, Burden of Disease, Cardiovascular and Metabolic Disease, Alcohol and Drug Abuse and Women's Health; areas of health that present a major challenge in South Africa.

Professor Tandi Matsha
Cape Peninsula University of Technology



Progressive Research in Risk Factors of type 2 diabetes and cardiovascular diseases in South Africa

Professor Richard Haynes
North West University



Development to the clinical phase of oxidant and redox drug combinations for treatment of malaria, TB and related diseases

Professor Alan Christoffels
University of the Western Cape



Comprehensive bacterial analytical toolkit for tuberculosis research (COMBAT-TB)

Dr Frederick du Plessis
University of Free State



High Energy X-Ray Beam advanced radiation dosimetry and verification (HARD)

Professor Heinrich Hoppe
Rhodes University



Integration of Bioassay capacity, target identification and multidisciplinary research for the discovery of drug lead compounds

Professor Soraya Seedat
Stellenbosch University



Understanding the SHARED ROOTS of neuropsychiatric disorders and modifiable risk factors for cardiovascular disease

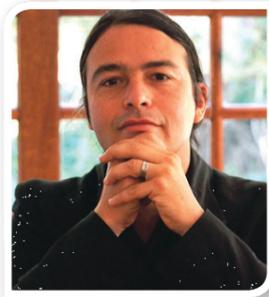


Professor Robin Wood
University of Cape Town



Tuberculosis Transmission: Host, Bacterium and Environment

Professor Tulio de Oliveira
University of KwaZulu-Natal



The causes and consequences of HIV transmission and drug resistance in hyper-epidemic setting in rural South Africa (UKZNHIVEPI)

Professor Akhter Goolam-Mohamed
University of Limpopo



Evaluating a new treatment regimen for patients with extensively drug-resistant TB (XDR-TB)

Professor Michael S. Pepper
University of Pretoria



Stem cell research and therapy - addressing South Africa's disease burden (Stem cells)

Professor Abolade Awotedu
Walter Sisulu University



Complete percutaneous pericardiocentesis plus interferon gamma testing versus empiric treatment without pericardiocentesis in suspected tb pericarditis

Professor Lynn Morris
University of Witwatersrand



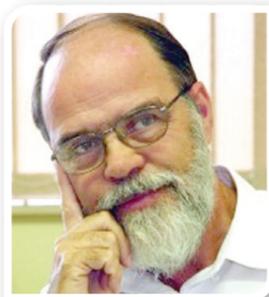
Antiviral properties of HIV vaccine-elicited antibodies

Dr Tamara Kreda
MRC - South African Cochrane Centre



South African Guideline Evaluation Project (SAGE project)

Professor Paul van Helden
MRC - Centre for Molecular and Cellular Biology



Improving TB diagnosis and treatment through basic, applied and health systems research (BAR-TB (Basic and Applied TB Research))

Professor Debbie Bradshaw
MRC - Burden of Disease



2nd South African Comparative Risk Assessment (SA CRA 2)

Professor Charles Parry
MRC - Alcohol and Drug Abuse Research Unit



Effectiveness of an alcohol-focused intervention in improving adherence to antiretroviral therapy (ART) and HIV treatment outcomes

Professor Naeemah Abrahams
MRC - Gender and Health Research Unit



The impact of rape in women on HIV acquisition and retention and linkages to care: a longitudinal study (Rape Cohort)

