

THE PRESIDENT'S REPORT

The MRC reaches middle age in 2009 – 40 years since it was first established in 1969. There have been many highlights in research and capacity development through those four decades. Translation of MRC research results into policy, practice, products and health promotion has had major impacts on the health and quality of life of South Africans in each of those 40 years, and 2008 remained true to form.

The nation's health research council continues to increase its outputs of peer-reviewed publications reaching 706 in 2008, 82% of them in international journals and books. Sixty-two PhDs graduated from our 41 Units, and we ourselves fund 59 black African PhD students amongst the 209 PhD students in our research Units. The steady stream of four new patents per annum again resulted in one spin-out company. Sixty-two PhDs graduating from a stable of 209 suggests an almost 100% completion rate if one assumes that



the average PhD takes four years to complete – a remarkable statistic. The demography of the 806 employees more closely reflects the face of the nation, 81% of the staff are black South Africans (49% of the 806 being black Africans) and 68% of them are female.

Of our 41 Unit Directors, 19 (nearly 48%) are black; three of them being black African and fifteen (38%) being women.

In research, development and technology transfer, the MRC (through the South African Vaccine Initiative – SAAVI) is one of the implementing agencies in the Italy/South Africa HIV and AIDS collaboration. This R240 million collaboration will include a Phase IIb therapeutic trial of an HIV vaccine; upgrading of health systems in and around the three clinical trial sites; and technology transfer to Biovac for HIV vaccine manufacture in South Africa.

A South African science milestone was reached

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when the first clinical trial of a human vaccine designed and developed in South Africa began in January 2009. This was the SAAVI DNA and MVA 'prime-boost strategy' HIV vaccine that has been in development by SAAVI principal investigators at the University of Cape Town over the past eight years. These include Prof Anna-Lise Williamson and Prof Carolyn Williamson. The vaccine was manufactured in the USA, kindly paid for by the National Institutes of Allergy and Infectious Disease (NIAID) of the National Institutes of Health (NIH) of the USA. The first nine participants were vaccinated in Boston, USA, with subsequent participants vaccinated in Cape Town and Johannesburg from July 2009 in this Phase I clinical trial involving healthy human volunteers. If the vaccine shows immunogenicity in human beings, there is interest in possibly progressing to Phase IIa clinical trials.

Another single milestone in MRC and global TB history was the publication in the prestigious *New England Journal of Medicine* of the first clinical trial in 35 years to demonstrate

efficacy of a new antituberculous drug in multidrug (MDR)- and extremely drug resistant (XDR)-TB. The drug is TMC207 and was developed by the TB Alliance and Tibotec (Johnson and Johnson) in a public-private partnership. This landmark clinical trial also pioneered new methodology in clinical trials in MDR- and XDR-TB, and five of the primary authors were MRC scientists from the MRC Clinical and Biomedical TB Research Unit in Durban, and the MRC and University of Stellenbosch Centre for Molecular and Cellular Biology.

This scientific milestone means that dramatically reducing the length of TB regimens from six months to four months or even a few weeks, now seems biologically feasible, and the possibility of eradicating TB from the world in the 21st century is no longer just a pipedream.

Finally, a decade of work by the MRC Malaria Research Unit and its partners in the Lubombo Spatial Development Initiative (LSDI) has resulted in malaria incidence declining in KwaZulu-Natal and Mpumalanga by 99% compared to



the baseline of 2000. Furthermore, the prevalence of the disease has decreased by 92%. This model has proven to be successful in malaria control to such an extent that the SADC Ministers of Health have endorsed implementing the LSDI model in the Trans-Zambezi Malaria Control Initiative involving Angola, Botswana, Namibia, Zambia and Zimbabwe, as well as in the Trans-Kunene Initiative involving Angola and Namibia. Indeed, the successes achieved by the MRC Malaria Research Unit have influenced changes in the WHO global malaria control policy, and encouraged the development of groups around the world dedicated to eradicating malaria from the planet by 2050.

The MRC, through its collaboration with scientists at the University of the Western Cape and Kwazulu-Natal, was part of the first Phase II trial of a South African medicinal plant, *unwele* (*Sutherlandia frutescens*), in patients living with HIV and AIDS who had not yet reached the stage in their disease where they required antiretrovirals. The collaboration was funded by the National Complementary and Alternative Medicine (NCAM) group of the National Institutes of Health of the USA and the results will be released later in 2009.

Over the past few years, I have been a member of an expert group convened by the Global Alliance for Vaccines and Immunisation (GAVI) to examine the use of Advanced Market Commitments (AMC) to fund drug and vaccine development and supply to low income countries. We helped develop a pilot AMC utilising pneumococcal conjugate vaccine in order to

avert 500 000 childhood deaths per annum in poor countries. The US\$1.5 billion pilot AMC is to be funded by four of the G8 countries, Norway and the Bill and Melinda Gates Foundation. The pilot AMC was launched in Rome in June 2009 and should be fully operational by 2012. If successful, it could be a model for AMCs for other diseases of mass burden, with the potential to save millions of lives.

The growth in external income continues, reaching 58% of the estimated total budget for 2009 of R536 million. Eighty two per cent of this external income comes in the form of competitive grants and contracts from the world's most prestigious health research organisations such as the NIH, the Wellcome Trust, the British MRC, the Bill & Melinda Gates Foundation, the European Union and the World Health Organisation. This attests to the high quality and relevance of MRC research to addressing South Africa's health priorities.

Thus, in its 40th year, the MRC has been part of some groundbreaking discoveries in medical science that could impact dramatically on the global epidemics of HIV and AIDS, TB and malaria in decades to come. In 40 years' time, the MRC may celebrate together with the rest of the world the achievement of these goals that in the early 21st century seemed so distant.

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