National Research Foundation honours Prof Makgoba

UKZN'S Vice-Chancellor Professor Malegapuru Makgoba has been awarded the prestigious National Research Foundation (NRF) President's Lifetime Achiever Award for his 'extraordinary contribution to the development of science...' The award was announced at a special function in Pretoria last night.



A momentous occasion for Vice-Chancellor Professor Malegapuru Makgoba who received the National Research Foundation's (NRF) Lifetime Achiever Award last night in Pretoria. Left: Dr Albert van Jaarsveld, NRF chief executive officer and the Minister of Science and Technology Naledi Pandor.

According to the NRF: 'The Lifetime Achiever Award, introduced in 2004, is awarded to a deserving South African individual who is considered to have made outstanding extraordinary contribution(s) to the development of science, in and for South Africa, over an extended period of time. The contributions must be considered to be of international standard and impact.'

Mac Mia, chair of UKZN's Council said: "It is with pride that Council congratulates Professor Makgoba as the recipient of the 2011 NRF President's Lifetime Achievement Award".

Best known for his vociferous appeal in 2000 as president of the Medical Research Council for the provision of antiretrovirals to the poor and vulnerable in South Africa, and for his fierce criticism of 'AIDS denialism and AIDS denialists', Professor Makgoba began his career at the Nelson R Mandela School of Medicine where he registered for a medical degree. His outstanding academic performance earned him a scholarship to Oxford where as the first African Nuffield Dominion Fellow he obtained a Doctor of Philosophy in Human Immunogenetics from Oxford University.

Groundbreaking discoveries

His brilliant career led to several groundbreaking discoveries in immunology with perhaps, the most notable being seminal discoveries in four distinct but complementary areas in 1988 that led to greater understanding of the human immune responses. Working with Drs. Martin Sanders and Stephen Shaw and others at the National Cancer Institute, Professor Makgoba was among the first to appreciate the importance of lymphocyte adhesion and:

- The importance of antigen-non-specific adhesion to T cell antigen-specific recognition - this was against conventional theory and wisdom within the immunology community.
- The demonstration that changes in adhesion molecule expression and function are cardinal features of naïve to memory cell differentiation (the first comprehensive description of naïve and memory T cells).
- For co-discovering the molecular receptor-ligand relationships for the first two direct intercellular interactions of heterophilic pairs of cell surface molecules described in biology.

He was instrumental in demonstrating the importance of adhesion molecules in T cell function through a series of what are now regarded as classic publications. These discoveries resulted in explosive expansion of knowledge of leukocyte adhesion, immunologic memory, direct intercellular interactions, and direct intercellular signalling in health and many

disease states.

More significantly, these discoveries were the opening step in the elucidation of many other direct intercellular interactions mediated by many now described pairs of heterophilic membrane proteins, across diverse fields of biology and medicine. These findings have impacted and continue to shape the approach and understanding of the pathophysiology, diagnosis and targeted therapy of a wide variety of disorders that include the major infectious diseases afflicting the African continent, namely HIV/AIDS, malaria and tuberculosis.

Outstanding research

The late Sir Raymond Hoffenberg FRCP, PRCP (former President of Wolfson College Oxford and the Royal College of Physicians (Lond), Emeritus Prof of Medicine, Birmingham University) described Makgoba's research as follows: "It is his research that is unquestionably outstanding... He has emerged as one of the best of the younger Investigators in this country (UK), which is absolutely remarkable when one considers the difficulties he must have encountered in his early training emerging from apartheid South Africa" (1987).

Professor Makgoba has a deep commitment to the development of African scientists and indeed the development of South Africa as a nation. He returned to South Africa and was the first Black South African appointed as the President of the Medical Research Council of South Africa and subsequently, the Vice-Chancellor of the University of Natal. He is currently a member of the President's National Planning Commission and Special Advisor (Science) to Minister NGM Pandor.

Lauded

His achievements have been lauded in South Africa and internationally. His awards include the Science-for-Society Gold Medal of the Academy of Science of South Africa; Gold Medal for Outstanding Leadership in Medical Research; the National Science and Technology Forum's Award for "Outstanding Contribution to Science, Engineering and Technology in South Africa"; a permanent display in the British National Museum of Science and Industry for "popularising state-of-the-art science in the 20th Century".

He was elected Fellow of the Royal College of Physicians of London, the Royal Society of South Africa and Foreign Associate Member of the US National Academy of Sciences' Institute of Medicine; and selected in 2006 as one of 65 Caring Physicians of the World by the World Medical Association in recognition for upholding "the fundamental and enduring traditions of the medical profession of-care, ethics and science".

He served as co-chair of the Nelson Mandela/Chissano Foundation's 2031 Hyper-endemic AIDS Project and is the founding member of the Council of the Global HIV Vaccine Enterprise. Under his leadership as Vice-Chancellor the University has forged a groundbreaking partnership with the Howard Hughes Medical Institute in the United States to establish a world-class research institute at UKZN to address the HIV/TB epidemic globally.

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