

# | MALEGAPURU WILLIAM MAKGOBA |



## TOP THREE AWARDS

- National Order of Mapungubwe (Silver), 2013
- ASSAf Science-for-Society Gold Medal, 2003
- The National Research Foundation President's Lifetime Achiever Award, 2011

## DEFINING MOMENT

DPhil from Oxford, 1983 and work on cell surface adhesion/signalling at the NIH; a lifetime of effort towards transformation of higher institutions.

## WHAT PEOPLE DO NOT KNOW

"Those who know me, think I should have been a comedian."

## FROM SHEPHERD TO SCIENTIST

From humble beginnings as a rural shepherd boy, Professor Malegapuru William Makgoba has risen to rarefied heights as a distinguished researcher in immunology, a prominent and respected leader in higher education, and a vociferous advocate for public health and transformation in research and higher education.

Educated at the University of Natal Medical School (UNMS) during the era of Steve Biko and the Black Consciousness Movement, Makgoba spent some years abroad as an immunology researcher before returning to South Africa in 1994 to champion transformation in higher education. Since then, he has been responsible for several major research initiatives around HIV/AIDS, most notably the South African AIDS Vaccine Initiative. He was also outspoken against the disastrous policy of AIDS denialism during the 2000s, coming into conflict with some of the most powerful politicians in the country at that time. Recently retired from his ten-year tenure as Vice-Chancellor at the University of KwaZulu-Natal, Makgoba now chairs the Transformation Oversight Committee of Public Universities. Throughout his career, he has demonstrated the vision, courage and integrity of a great leader, with a clear passion for improving South African lives and a laser focus on equal opportunity for all.

As a young boy, Malegapuru William Makgoba would care for his father's sheep, goats, ducks and chickens after school. Surrounded by the hills of Limpopo, in the rural village of Sekhukhune, he would rest in the shade of a marula tree and ponder the wonders of the natural world.

This was indeed fertile ground for his enquiring mind, which eventually propelled him far beyond such humble beginnings.

"I suspect that the combination of my surroundings, loneliness, free time and all the animals that my father looked after, was a good environment in which to think about science as a discipline," he says.

Now an esteemed Professor, Makgoba completed his schooling in 1970, at Hwiti High School, which has since recognised his contribution to science and education by naming its science block after him.

## STARTING REAL EDUCATION

He then enrolled at UNMS, where, he says, his real education began. "At that time, UNMS was a hive of political activity. You couldn't ignore it, it was always in your face; your classmates and other comrades were involved in it."

The racially segregated Durban Medical School, as UNMS was known upon opening in 1951, holds an important place in the history of apartheid South Africa. It was there that struggle stalwarts, such as Steve Biko, Mamphela Ramphele, Nkosazana Dlamini-Zuma, Ralph Mngijima and Aubrey Mokoape, first came together to stand against the institutional racism of the apartheid system. It was there that the South African Student Organisation (SASO) was formed in 1968. And it was there that the ideas behind the Black Consciousness Movement first took root.

For Makgoba, who describes himself at the time as "politically naïve", his time at Durban Medical School was characterised by a parallel education. "I was focused on my studies, of course, but I was also trying to familiarise myself with the political dynamics of the country. We were learning medicine, but at the same time we were being politicised." Steve Biko was President of the Student Representative Council (SRC) and Makgoba speaks of Biko and Barney Pityana (both a part of SASO leadership in the 70s) as his political mentors.

While he recalls his experience at Durban Medical School with happiness, it was a dark time in South Africa's history, which Makgoba only refers to off-handedly. "Of course, you always had the security police coming to raid you, wake you up in the middle of the night and search the hell out of you."

Historians speak of the unreasonable conditions that students had to work under, including discriminatory teaching practices, racist lecturers, poor living conditions and the countrywide restrictions for non-whites on services like public transport. It was undoubtedly a difficult environment in which to study, and thus no mean feat for Makgoba to have completed his medical degree with merit by 1976.

For 15 years following his time at the University of Natal, Makgoba worked abroad as an immunology researcher. His work focused principally on genes and cell surface proteins that are responsible for cellular interactions involved in the immune response – this research is still relevant today. He first went to Oxford, where he was a Doctor of Philosophy (DPhil) student under Sir Andrew McMichael, and one of the first researchers to clone and study a 'histocompatibility gene'. Such genes code for the cell surface proteins called histocompatibility complexes, which we now know to be major components of the immune response in all animals.

He completed his DPhil at Oxford in 1983, and promptly became first assistant to the President of the Royal College of Physicians, the late Sir Raymond Hoffenberg, working in clinical wards. "It was a good place to be, because every young physician wanted to work for the President of the Royal College of Physicians," says Makgoba. "I felt very privileged to be in that position."

Hoffenberg spoke very highly of his charge. "His research... is unquestionably outstanding. He has emerged as one of the best of the younger investigators in this country, which is absolutely remarkable when one considers the difficulties he must have encountered in his early training."

Later, at the National Cancer Institute in the United States (US), Makgoba and colleagues conducted high-impact research, particularly from 1986 to 1988, when the research group of which he was a part identified cell surface proteins that help immune system cells stick to and signal to one another, thus revealing a major feature of the human immune system that was previously unknown. "This work is still cited today, close to 30 years after being published. It changed the field." In fact, one of those published papers has been cited over a thousand times.

From there, he was headhunted to lead a research team at the Royal Postgraduate Medical School in London, where his group discovered that the proteins and complexes he had been working on in the US circulate in our bloodstreams. They showed that these molecules could be used to diagnose inflammatory diseases like cancer.

## COMING BACK HOME

In the heady period following Nelson Mandela's release from Robben Island, Makgoba had a chance to meet the nation's hero in person. "He said to me," recalls Makgoba, "'I think you must come back home'." When the University of Witwatersrand (Wits) offered him the position of Deputy Vice-Chancellor in 1993, he did just that.

For the 22 years that followed his return to South Africa, Makgoba occupied positions of leadership in higher education. First at Wits, then at the Medical Research Council (MRC), and finally at the University of Natal (which later became the University of KwaZulu-Natal (UKZN)). He says the best part of being a Vice-Chancellor (at UKZN) was signing graduation certificates. "This wasn't in my job description, but it was the most fulfilling and rewarding, because signing a certificate of a student is an enduring thing. It's an honour."

Once, while at a New Year's Eve party at the Livingstone Hotel on the Zambezi, an old English couple bought him a bottle of champagne. When he asked why, they had said, "Because you hang in our house in England. You signed that certificate and graduated our daughter," he remembers gleefully.

Behind the man who had beaten the odds to rise to greatness, lies courage, passion and a drive to make a difference in the lives of ordinary South Africans, as demonstrated by his tireless efforts against the scourge of HIV and AIDS.

While at the MRC, Makgoba had pioneered the South African AIDS Vaccine Initiative (SAAVI), which continues to fund South African research into an HIV vaccine. "It's a big project and a necessary project," says Makgoba. "As a developing or middle-income country, you want to have the capacity and the flexibility to adapt research to deal with the issue at hand." SAAVI has produced several prominent female researchers such as Professor Lynn Morris (National Institute for Communicable Diseases), and Professors Anna-Lise and Carolyn Williamson at the University of Cape Town.

Makgoba was also the founding Chair of the UNAIDS/WHO African Aids Vaccine Programme during his time at the MRC. But perhaps his greatest achievement in this arena was during the era of AIDS denialism, synonymous with President Thabo Mbeki's leadership during the early 2000s. Despite overwhelming evidence to the contrary, the South African government took the official stance that HIV does not cause AIDS. Makgoba took a very vocal and public stand against this disastrous policy, which, some researchers estimated, cost over 350 000 lives.

"I've never felt that I was more needed to save the lives and dignity of people than during that period of AIDS denial," he says. A comment by Justice Edwin Cameron on Makgoba's role in fighting AIDS denialism deserves repeating in its entirety. "The clarion voice of truth speaking amidst the siren clamour of unscientific waywardness earned Makgoba few friends in the political establishment. But it enhanced his standing as a medical scientist faithful to his discipline and to canons of scientific enquiry. In taking this stand, Makgoba occupied a unique position in South African public life. His professional eminence in the field of immunology, his profile as a public intellectual, and his passion for truth combined to an extraordinary degree at a moment in which a nation searched for answers."

And as if this wasn't enough to secure his place as champion in the fight against HIV/AIDS, his contributions to South African research in the field surely does. Using relationships formed while abroad, Makgoba was instrumental in securing major international funding to set up the Africa Centre and the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH), funded by the Wellcome Trust and the Howard Hughes Medical Institute, respectively.

Combined with the CAPRISA initiative funded by the National Institutes of Health (NIH), all located in an area of high HIV/AIDS prevalence, these institutions represent possibly the largest coordinated HIV research effort in the world. Makgoba remains humble about the success: "There were challenges in terms of the health of the country that related to what I would call

my passion, and of course when you do these things that require big money, people have to trust you. I enjoyed the trust of my colleagues that I had worked with abroad, and I used that to the advantage of the university."

If there's one other thing that Makgoba will forever be remembered for, it's his passion for transformation in higher education in South Africa. "Since my arrival," he says, "part of my success story has been transformation of research institutes and higher education institutes; it defines who I am." In 2013, he received the National Order of Mapungubwe bestowed by the President in recognition of his herculean efforts at institutional transformation, and, largely thanks to him, UKZN is now the most transformed institution in South Africa.

Despite these successes, Makgoba believes South African research still has a long way to go to reach its potential. "I want to see South African research transformed in a very meaningful and substantial way, such that we give all those with potential the opportunity to succeed. Their success is our success as a nation."

Though he recently retired as Vice-Chancellor of UKZN, he continues to push the transformation agenda as Chair of the Transformation Oversight Committee of Public Universities. He is also the Deputy Chair of the second National Planning Commission, having served on the first one since 2010 under then-Minister Trevor Manuel.

He has also recently been appointed the first Health Ombudsman for South Africa.

And so, while he is taking a step back from the very public role that he has played in the country's health research and in higher education in general, Professor Malegapuru William Makgoba will be remembered as a leader in thought and in action; a man of courage, integrity and ironclad resolve to do the right thing. Now retired to his childhood home of Sekhukhune, this great South African mind will continue to improve South Africa for years to come through his thoughts, his words, and most importantly, his deeds.

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A. Academy of Science of South Africa (ASSAf) Publications

C. ASSAf Policymakers' Booklets

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2017

# Legends of South African Science

Academy of Science of South Africa (ASSAf)

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