

| WIELAND GEVERS |

TOP THREE AWARDS

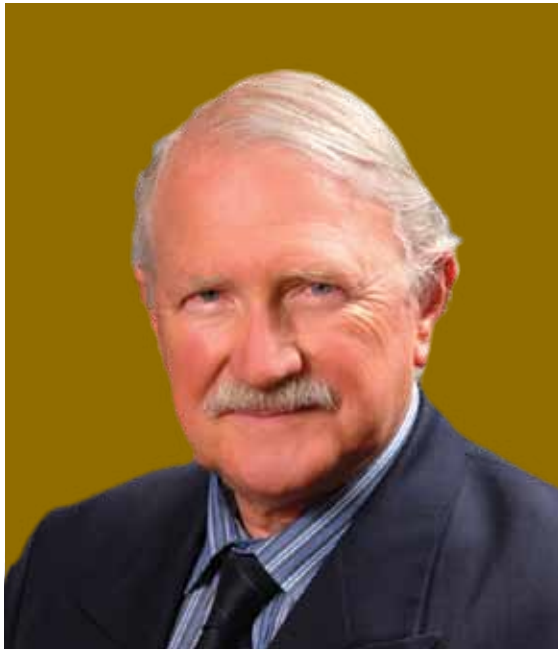
- Rhodes Scholarship, 1962
- Honorary doctorate in science (DSc honoris causa), 1998
- Special Meritorious Service Gold Medal by the Academy of Science of South Africa, 1998

DEFINING MOMENT

I was programme director at Mamphela Ramphele's formal inauguration as UCT's Vice-Chancellor in 1996. When President Mandela took up his position at the podium to deliver his address, he paused for a very long time before speaking. I was the only person (out of the huge audience) who knew that the President was conflicted between his extraordinary sense of courtesy and the fact that he didn't know my name, and therefore could not formally acknowledge my presiding role! This moment captures my lifelong avoidance of publicity, nearly always a mover and shaker but happiest out of the limelight.

WHAT PEOPLE DO NOT KNOW

I have been guided throughout my life by the German concept of 'Bildung' (roughly translatable as the full realisation of one's human potential), which comprises two components: 'Ausbildung', the fullest and never-completed development of all one's own talents or capacities, and 'Anbildung', the unending acquisition of as much knowledge as can be gained about everything in the world. Falling short of these lofty ideals is less of a problem than not having them in the first place.



INSTITUTION-BUILDER OF NOTE

In 1970, a 32-year-old Wieland Gevers faced a big decision: To stay in North America, taking up a prestigious tenured Associate Professorship at the leading Canadian university, or to return to his native South Africa. The Canadian job involved setting up a research laboratory in a famous institute in Toronto.

Gevers chose to come home, even though the job on offer to him in South Africa – a senior lectureship with a small grant at the University of Cape Town (UCT) – was a considerable step down by comparison.

But to the young father, it made perfect sense. Having spent the last eight years of his life learning from two Nobel Prize winners – Hans Krebs at Oxford University in the UK, and Fritz Lipmann at Rockefeller University in New York – Gevers knew what an 'overseas' science career had to offer. But he felt that North America, though full of opportunities, was an overfilled pond where he would be a small fish. In South Africa, he reasoned, he could be a bigger fish with the ability to pursue a more varied career.

Forty-five years after his return, Gevers is known as one of the 'elder statesman' of South African science – an institution-builder, academy-founder and policy-shaper. He has acted as a pioneer in cardiology and muscle research, creating and building strong research centres in these fields – the last and biggest being UCT's Institute for Infectious Disease and Molecular Medicine (IDM). A talented administrator and mediator, he also played a leading role in founding or revitalising several of South Africa's major academic bodies, including the South African Society for Biochemistry and Molecular Biology (SASBMB) and the Academy of Science of South Africa (ASSAf).

But many of Gevers' creative and organisational gifts came as surprises to himself, and he says his most important life lesson is this: Do not be daunted by what you don't know about yourself yet, but capitalise fully on the things you already excel in and build on that in new fields. Also, be careful to make assumptions about what you can and cannot do until you try – some talents only reveal themselves when the right opportunity arises.

THE EARLY YEARS

Gevers' early childhood was far from easy. Growing up to German parents in the old Transvaal during World War II, his family was ostracised for their 'enemy' heritage. People would throw stones at them, or cross the road to get away. Wieland was the fourth child in the family, and spoke German at home. He matriculated with six distinctions from his high school in Nigel on the East Rand, and his excellent grades won him a place and a scholarship to study medicine at UCT.

At university, Gevers was a talented and extramurally active student (he edited both the university's rag magazine and the medical school's student research journal in his fifth year). He received the gold medal in 1960 for his first-class degree, and was also singled out as UCT's overall top graduate that year. After graduating, his internship included spending time at the Red Cross War Memorial Children's Hospital assisting Chris Barnard, the cardiac surgeon who famously performed the world's first heart transplant at Groote Schuur Hospital in Cape Town, in pioneering operations on newborn babies.

During his internship, Gevers realised that a career in clinical medicine was not for him. He had developed an interest in medical science, and won a coveted Rhodes scholarship to study at the world-renowned Oxford University in the UK. Before leaving for Oxford, he spent six months at UCT on a research fellowship under Professor Eugene Dowdle, sharpening up his laboratory and chemistry skills.

Even so, when Gevers arrived at Oxford he was aware that his knowledge of chemistry remained weak. He spent many lonely hours in the library of Balliol College, quietly swotting to catch up. In just one year he completed the Honour School BA, graduating in 1963, and was offered a postgraduate position in the laboratory of Hans Krebs, who had won the 1953 Nobel Prize in Medicine for his discovery of the cellular respiration cycle that bears his name.

Gevers once more felt out of his depth in Krebs' lab. But he was surprised to find an ally and mentor in the Nobel Laureate, who like Gevers, had also

started out as a medical doctor. Krebs told Gevers: "Don't worry about the things you haven't formally learned. The most important thing is that your work habits, picked up as a doctor, are first class." This put Gevers at his ease. What is more, Krebs had been born in Hildesheim, Lower Saxony, and they often spoke German with each other.

During his PhD, Gevers literally poured his own blood into his research. Having developed a new method for measuring oxygen uptake in isolated tissues, he drew a pint of his own blood to prepare an enzyme needed to keep the carbon dioxide level constant while measuring oxygen uptake, and Gevers received praise from the legendary German biochemist Otto Warburg, another Nobel Laureate, who toured Krebs' lab during a visit to Oxford to receive an honorary degree.

Gevers graduated from Oxford with both a Masters and a PhD in biochemistry in 1966. By then, he had married his wife, being the first Rhodes scholar to do so during the fellowship, and sired two children. The same year, he received a Helen Hay Whitney Fellowship to become a postdoc at Rockefeller University in New York in the USA. Once more he made a substantial switch in the focus of his work. At Oxford he had studied metabolism. In New York he would do research on molecular biology.

He once more joined the lab of a famous scientist: Fritz Lipmann who had shared the 1953 Nobel Prize in Medicine with Krebs for the discovery of coenzyme A, which plays a key role in metabolism. Lipmann – another German-speaker – put Gevers to work studying the molecular mechanisms of how antibiotics are made. It was here that Gevers really cut his teeth on benchwork – this was before labs were highly automated, and Gevers performed over 10 000 lab tests in a single year.

Gevers' work at Rockefeller contributed to the discovery of how antibiotics are generated in bacteria and fungi using multi-enzyme complexes capable of organising the process of biosynthesis on their surfaces. He received the honour of presenting the results of the lab's research to an eminent audience that included James Watson, one of the co-discoverers of the

DNA molecule. This was one of the high points of Gevers' scientific career. However, life in New York wasn't only about science. It was here, during his brief revolutionary phase (it was 1968 after all) that Gevers grew his trademark moustache that since then has adorned his upper lip.

RETURN HOME

By the end of his postdoc, in 1970, the world of science lay at Gevers' feet. He had cut his teeth on world-class research, mentored by some of the most famous people in his field. But it was at this time that the rubber band connecting him to his home country began to stretch. Gevers turned down a job at a Canadian university setting up a new research laboratory and went back to UCT, his wife and children in tow.

After a few months at UCT, Gevers realised he had made a mistake. The job was too parochial, the funding too constrained, for him to feel that he was fulfilling his destiny. Thankfully, he was headhunted by Stellenbosch University (SU) as a Research Professor and Director of a Medical Research Council (MRC) Unit in molecular and cellular cardiology; this grew in a few years into a large new Department of Medical Biochemistry.

The move was not far in geographical terms. SU's medical school is located in Tygerberg, on the northern outskirts of Cape Town. However, culturally, the move was significant. At UCT, Gevers had been reared in the English-speaking, outward-looking academic tradition. At Stellenbosch, an Afrikaans bastion, Gevers caused some friction with the administration by bringing many young English-speaking postgraduates from UCT and elsewhere to come work with him in his department.

As if bringing English into the labs wasn't bad enough, the medical school was also uncomfortable with the sort of people Gevers was bringing from UCT, which had a much more liberal tradition. Among them, Gevers recalls, was a young Jewish student who had been involved in black African trade unionism, and who wore sandals and grew his hair long. Could he not be removed, the registrar pleaded with Gevers?

Gevers stuck to his guns. He also did not move his family to the northern suburbs, but stayed put in Rosebank, the leafy suburb below UCT where his artist wife had been born. There, they bought an old house that became their long-term home. Gevers says that he has done some of his best thinking and writing, as well as singing and piano-playing, in his home office overlooking a lush garden with its exotic Kiri tree, imported from the Far East and planted by him only a short time after the Gevers moved in.

At Stellenbosch he changed his field of study to cardiology and how the heart muscle works. By now, he was confident in his ability to switch between study areas – his many earlier career changes had ensured this to be the case. He loved the challenge of setting up the new department, the freedom to hire people and set up new policies and ways of working. He also enjoyed the teaching, which he had discovered a knack for, to his own surprise, during his time overseas. Gevers took on an extra teaching workload to allow the junior scientists more time to do research, and his enthusiasm and skill made him a popular lecturer at the medical school.

The mid-70s is also when Gevers, as he likes to put it, discovered his skill for 'getting things done'. In 1974, he created and became the founding President of the South African Biochemical Society. He lobbied for and succeeded in getting South Africa admitted to the International Union of Biochemistry, despite the academic sanctions against his country at the time.

TRANSFORMING SA's ACADEMY

In 1978, however, his *alma mater* offered him a job he could not refuse. He returned to UCT to mimic what he had done at Stellenbosch – setting up a research and teaching department in medical biochemistry, including new MRC units on muscle research and atherosclerosis. He hired a mix of science and medical graduates to populate his centre, having realised the value of having both sets of expertise at hand. He began studying why some people in South Africa suffer from early-onset and life-threatening

heart attacks, including the genetic factors that make people susceptible to the condition. This work led to the development of diagnostic tests that can help doctors identify patients at risk.

Gevers stayed at UCT until his retirement in 2002. From 1990 to 1991, he was Acting Deputy Vice-Chancellor, a role he then took up full time until his retirement. From 1996, he worked as senior DVC with Dr Mamphela Ramphale, UCT's first black Vice-Chancellor.

As South Africa made the transition to democracy, Gevers played a central role in revitalising its academic community. In the late 1980s, he had already begun the transformation of the Royal Society of South Africa (RSSAf). In the mid-90s, Gevers was one of the senior academics involved in drafting a vision for a new, inclusive academy to become an alternative to the old RSSAf and the Afrikaans-speaking academic community's *Suid-Afrikaanse Akademie vir Wetenskap en Kuns*.

The new Academy of Science of South Africa (ASSAf) was launched with 100 inaugural members in 1996 – a feat that owed much to Gevers' tireless mediating between the English and Afrikaans academics on the one hand, and with the country's new political leadership on the other. He served as ASSAf's President from 1998 until 2004, and played a leading role in producing its first two influential reports, one on scholarly publishing in South Africa, the other on HIV/Aids, TB and Nutrition.

Gevers remains passionate about South African science. His best advice to young people who want to excel? "Capitalise on your assets. Don't be scared to aim high. Above all, be creative and innovative." His own path wasn't always smooth, he says, and perhaps staying in America would have been more straightforward than returning to South Africa. But, it would probably have been boring, he says with a smile. "This has been far more fulfilling as a life."

Academy of Science of South Africa (ASSAf)

ASSAf Research Repository

<http://research.assaf.org.za/>

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

C. ASSAf Policymakers' Booklets

2017

Legends of South African Science

Academy of Science of South Africa (ASSAf)

Academy of Science of South Africa

Academy of Science of South Africa (ASSAf), (2017). Legends of South African Science.

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