

AWARDS, HONOURS AND ACHIEVEMENTS

- Honorary doctorates in science (DSc *honoris causa*) by the University of South Africa (Unisa) (1989), University of Cape Town (UCT) (1990), Stellenbosch University (SU) (1991) and University of Pretoria (UP) (1994)
- The Order for Meritorious Service Class 1: Gold (1989)
- Ernest Oppenheimer Memorial Trust Fellowship (1964)

DEFINING MOMENT

When just nine months into his doctoral study at the University of Zürich he, a 22-year old with a rural background, was appointed as Research Assistant to Nobel Laureate Paul Karrer.

WHAT PEOPLE MIGHT NOT KNOW

After his retirement from science and education-related activities, he moved into a retirement village and devoted much time to the plight of the elderly, the applicable legislation and the management of retirement villages. He 'celebrated' his 80th birthday at the Supreme Court of Appeal in Bloemfontein on behalf of his fellow retirement village residents. Needless to say, the favourable verdict was a crowning experience.

A FASCINATION WITH NATURE THAT CAN CHANGE THE WORLD

"My lifelong fascination with nature and science has given me the opportunity to live a fulfilling life and contribute to shaping future South African research endeavours." This fascination led Christoph Garbers to fulfil his dreams by meeting his heroes in science and allowed him to transform the Council for Scientific and Industrial Research (CSIR). The manner in which this transformation came about even astonishes Garbers.

"Not in my wildest dreams could I have foreseen this sequence of events." It all started 60 years ago when opportunities for research in chemistry were very limited. After completing his studies, he applied to a number of organisations and secured a job at the CSIR with a remuneration of £53 per month (equivalent to R106.00). At that time the CSIR staff was small enough to allow each new employee to be introduced to the then CSIR President, Dr Meiring Naudé. "Unbeknown to me, Naudé had a farm in the Piet Retief district and my father

had rendered services to him. Naudé related that my father, without my knowledge, had consulted him about the future education of his two sons, my brother and I," he says. He had recommended that the boys pursue study in the sciences.

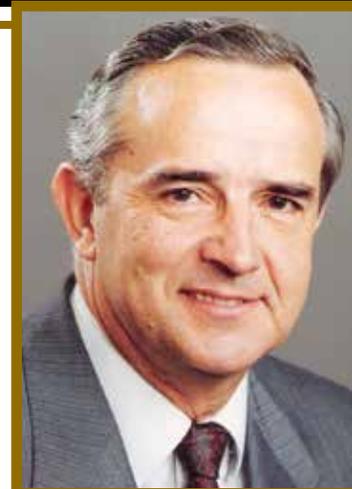
Garbers' brother, Johan majored in chemistry and physics and pursued a career in education, while Christoph majored in chemistry and mathematics and pursued a career in chemistry. After 20 years at SU, Prof Garbers returned to the CSIR as Vice-President responsible for research funding at universities, technikons and museums in the sciences. During his first day at the CSIR, Garbers received a phone call from his brother. "He informed me that he would be joining the Human Sciences Research Council (HSRC) as Vice-President responsible for research funding at universities in the human sciences," he said. The then President of the HSRC passed away seven months later and was succeeded by Garbers' brother. Dr Chris Brink, then President of the CSIR, died unexpectedly 14 months later and I succeeded him," says Garbers, the surprise still in his voice.

Christoph Garbers graduated with a BSc *cum laude* (majoring in chemistry and mathematics) in 1948 at the tender age of 18. In 1950 he completed an MSc *cum laude* and in 1951 joined Klipfontein Organic Products Corporation – a factory that was involved during World War II in the production of chemical warfare agents and which in the post-war years used its chlorine production to manufacture the pesticides dichlorodiphenyltrichloroethane (DDT) and benzene hexachloride (BHC).

MEETING THE LAUREATES

"In February 1951, UP notified me that I had been awarded a Union Scholarship for two years for overseas study," he remarks. "I turned my attention to Professor Paul Karrer at the University of Zürich because Karrer was a Nobel Laureate in the field of organic chemistry."

"To be part of the main-stream of science was fulfilling and this was further augmented by the privilege of attending many lectures by visiting authorities in world science," he says. "I specifically recall the lectures by Niels Bohr and



Werner Heisenberg.”

During a sabbatical at Imperial College in 1964 and 1965, he found himself at the laboratory of Professor Derek Barton who was awarded the Chemistry Nobel Prize in 1969.

As if meeting and working with some of the biggest names in science wasn't enough, Garbers was offered an appointment as Research Assistant to Professor Karrer on condition that he stay for a further two years. He completed his D Phil *cum laude* in 1953 and continued researching the structure of the newly isolated Vitamin B12 until the middle of 1954.

The transition from the CSIR to SU in 1958 was not an easy one. The SU Physical and Organic Chemistry Department's physical chemistry curriculum was not up to date with developments that had taken place since the 1920s and research in organic chemistry was non-existent at the institution. Garbers embraced the challenge and started with two talented PhD students; this was a major challenge because equipment and chemicals were not readily available, he adds.

In 1978, he was approached to take over from Professor Danie Joubert as Vice-President of the CSIR with executive responsibility for the Research Grants Division. “In considering the change I realised that through many people's efforts I could experience the pleasure of research, of probing the unknown and of working with keen minds.”

He decided to make a clean break from his now well-equipped research department and accept the position where he would be responsible for facilitating the research careers of the upcoming science and engineering generation. After re-joining the CSIR as Vice-President in 1979, he was promoted

to Deputy President in 1980 and succeeded Brink in 1980 as President of the CSIR.

The liberation struggle, increasing international isolation and demands on the State budget impacted on the CSIR during his time there. During that period, the role and accountability of research institutions all over the world was also being questioned and in response to substantial budget cuts, the CSIR decided against a policy of 'equal misery for all'.

Garbers led efforts to help the CSIR become more autonomous through greater self-sufficiency, greater market orientation and client participation, while remaining involved in research focusing on South Africa's needs. Among many other changes at the CSIR, Garbers helped bring about the emergence of a leaner CSIR with a young, capable, dynamic and motivated leadership. He also established the responsibility by the CSIR for funding research in the sciences at universities, technikons and museums in a new statutory council, the Foundation for Research Development – the forerunner of the National Research Foundation (NRF).

During his active career, Garbers served as an advisor to or on the boards, councils and commissions of many institutions. He was also a member of the National Commission on Higher Education which helped establish the National Student Financial Aid Scheme (NSFAS). His fascination with science and his dedication to research has created a better today, and untold tomorrows.

“I have come to realise that you pass this way but once, and what you leave behind is what you instil in fellow travellers. Unlocking the latent talent of particularly our youth is a cornerstone of the future.”

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

C. ASSAf Policymakers' Booklets

2020

Legends of South African Science II

Academy of Science of South Africa (ASSAf)

Academy of Science of South Africa (ASSAf)

Academy of Science of South Africa (ASSAf), (2019). Legends of South African Science II.

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