

Resume Prof. Pieter Streicher Steyn

Born January 5, 1940, Vryburg, RSA.

UNIVERSITY TRAINING

University of Stellenbosch, Stellenbosch: BSc (1959), MSc (Chemistry *cum laude*) (1963)

University of South Africa, Pretoria : PhD (1966), and PhD (*h.c.*) 2010

University of Wisconsin, USA : Post-doctoral fellowship (1967-1968)

Bristol University, Bristol, UK : Visiting Fellow (March – June 2001)

EMPLOYMENT

- 1 CSIR (1964 – 1993) also as founding director of Foodtek, the current Division of Biosciences at CSIR.
- 2 SASOL Professor of Chemistry and Head of the Departments of Chemistry and Biochemistry at the Potchefstroom University for CHE (October 1993 – June 1999).
- 3 SU Director Research (July 1999 – Nov. 2003) and Senior Director: Research (September 2008).
- 4 Consultant to the Maize Trust, Pretoria (2009 --2018)
- 5 Consultant to InnovUS, the Office of Technology Transfer of SU (2009- 2019)

EVALUATION BY THE NATIONAL RESEARCH FOUNDATION (NRF, Pretoria)

Rating: A (Chemistry) (1987)

RESEARCH PUBLICATIONS

Collaborative research was undertaken locally and internationally (Australia, New Zealand, Japan, USA, UK, Canada, and Europe) with 18 research groups, and led to 193 scientific papers and 2 patents. The total number of references to Steyn's publications exceeds 8000.

OFFICES AND COMMITTEE ASSIGNMENTS HELD IN PROFESSIONAL SOCIETIES

Royal Society of South Africa:

Elected as a Fellow (1996)

Academy of Science of South Africa:

One of its 54 founding members (1994)

South African Chemical Institute (SACI):

Served on its Council, Associate Editor of the SA Journal of Chemistry, Member of the Organizing Committee of several SACI Conventions. Elected as Honorary Member and as Fellow of SACI.

International Union of Pure and Applied Chemistry (IUPAC), RTP, North Carolina, USA:

- Member of the national delegation to IUPAC General Assemblies and Council meetings from 1973 to 2005.
- Chairman of the 6th IUPAC International Symposium on Mycotoxins and Phycotoxins, Pretoria, 1985
- Member of the Bureau of IUPAC (1991- 1995)
- President of the Applied Chemistry Division of IUPAC (1991-1995)
- Member of the Strategy Development and Implementation Committee of IUPAC (1997-1998)
- Vice-President of IUPAC (2000-2001)
- President of IUPAC (2002-2003)
- Chairman of the IUPAC CHEMRAWN XII Conference: The Role of Chemistry in Sustainable Agriculture and Human Wellbeing in Africa. Stellenbosch University, 2007.

International Association for Cereal Science and Technology (ICC), Vienna, Austria:

- President of the ICC, Vienna (1992-1994)
- Chairman of the Organizing Committee of the ICC International Symposium – Cereal Science and Technology: Impact on a Changing Africa, Pretoria, May 1992

EDITORIAL TASKS:

- Member of the Editorial Board of *Journal of Environmental Science and Health, Part B, Pesticides, Food Contaminants, and Agricultural Wastes* (1986-2010).

- Regional Editor (Africa) of *Journal of Food Additives and Contaminants* (1987-2008)
- Associate Editor for Chemistry of *The S A Journal of Science* (2008-present)

SCIENTIFIC LECTURES:

Numerous invited and plenary lectures were presented at the Conventions of SACI as well as internationally at IUPAC Conferences, the XVII Mendeleev Congress on General and Applied Chemistry, Kazan (Russia) in 2003 and Universities worldwide.

Editorial tasks

- Member of the Editorial Board of *Journal of Environmental Science and Health, Part B, Pesticides, Food Contaminants, and Agricultural Wastes* (1986-2010).
- Regional Editor (Africa) of *Journal of Food Additives and Contaminants* (1987-2008)
- Associate Editor for Chemistry of *The S A Journal of Science* (2008-2018)

MEMBERSHIP OF THE FOLLOWING PROFESSIONAL SOCIETIES

- Member of The / Die Suid-Afrikaanse Akademie vir Wetenskap en Kuns
- Founding Member of The Academy of Science of South Africa (ASSAf)
- Fellow of The Royal Society of South Africa
- Fellow of the International Union of Pure and Applied Chemistry (IUPAC), RTP, North Carolina, USA
- Fellow of the International Association of Cereal Science and Technology (ICC), Vienna, Austria.
- Fellow of The World Academy of Science (TWAS). Trieste, Italy
- Fellow of the African Academy of Science (FAAS). Nairobi, Kenya
- Fellow of the South African Chemical Institute (SACI).
- Fellow of the International Union of Food Science and Technology (IUFoST).

National and International awards

- ◆ Recipient of the Raikes Gold Medal of the South African Chemical Institute (1975). This medal is awarded to chemists less than 35 years of age, based on their publications in international journals.

- ◆ Recipient of the Gold Medal of the South African Chemical Institute (1987). The Gold Medal is the highest award of the South African Chemical Institute.
- ◆ Recipient of CSIR Merit Prize (1987). Top award (gold) of CSIR.
- ◆ Recipient of the Havenga Gold Medal for Chemistry (1992). An award made every four years by Die SA Akademie vir Wetenskap en Kuns for outstanding contributions in Chemistry.
- ◆ Recipient of the Friedrich Schweitzer Medal (1993). Award made by the International Association of Cereal Science and Technology (ICC), Vienna, for distinguished services in the furtherance of the aims and ideals of the ICC.
- ◆ Recipient of the Ernest Oppenheimer Memorial Trust, University Travelling Fellowship for 1999 (R100 000).
- ◆ Recipient of the Merit Award (Gold) for Outstanding Services of the Rector of Stellenbosch University (2000).
- ◆ Recipient of the Hendrik van Eck Medal (Gold) of the South African Chemical Institute (2002). The award is made for contributions in the industrial sector and/or for the furtherance of chemistry in the community in South Africa.
- ◆ Recipient of the Southern African Association for the Advancement of Science (S2A3) South Africa Medal (Gold) (2004). The South Africa Medal is awarded to a person who, during his or her life, has contributed to the advancement of science, either on a broad front or in a specialized field of the natural sciences and those human sciences which have traditionally participated in the activities of the S2A3.
- ◆ Recipient of the Academy of Science of South Africa's (ASSAf) Science for Society (Gold Medal) (2007). The overarching criterion of the Gold Medal is the outstanding application of scientific/scholarly thinking in the service of society, and for scientific/scholarly achievements

- ◆ Recipient of the Top award (Category A) (2009) of the National Science and Technology Forum. The award is made for excellent contributions over a lifetime in scientific research and technological innovation
- ◆ Recipient of a PhD degree (h, c.) from the University of South Africa, Pretoria (2010) in recognition for his research contributions in the chemical sciences and for distinguished services to the international scientific fraternity as President of IUPAC and President of ICC.
- ◆ Recipient of the National Order of Mapungubwe (Class Silver) (2011) of the Republic of South Africa. The prestigious award was made by the State President in recognition of Steyn's contributions to the chemistry and biosynthesis of mycotoxins.
- ◆ Recipient of the M.T. Steyn Medal of Die SA Akademie vir Wetenskap en Kuns (2013) The medal is one of the Academy's most important tributes for leadership at the highest level in the field of the natural sciences and technology. The medal can be regarded as the culmination of a person's life's work.
- ◆ Recipient of the Marloth Award of the Royal Society of South Africa (2020) The highly-prized medal is awarded in recognition of his illustrious career in advancing the discipline, Organic Chemistry, in the service of science and of mankind.

EXPERTISE

The isolation, analysis, structure elucidation, synthesis, and biosynthesis of mycotoxins, e.g. the aflatoxins and their congeners, the ochratoxins (nephrotoxins), penitrems, lolitrems and the janthitrems (tremorgenic mycotoxins), phomopsins (hepatotoxins –cause of lupinosis), citreoviridin, asteltoxin and related polyenes. These scientific contributions were recognized by the awards of the South African Chemical Institute (the three top awards), Die SA Akademie vir Wetenskap en Kuns, The South African Academy of Science, The National Science and Technology Forum, The SA Association for the Advancement of Science, the National Order of Mapungubwe (Class Silver), the prestigious award of the Republic of South Africa (2011) and the Royal Society of South Africa.

The management of research, development and innovation as a member of the CSIR's top management team (1987-1993) and subsequently as CSIR Fellow, Head of the SASOL Centre for Chemistry at PUCHE (1993-1999), Senior Director Research at SU (1999-2008), and as consultant to Innovus, the SU office of technology transfer (2009 --). Substantial expertise in the functioning of South African universities, particularly Stellenbosch University and research driven bodies such as CSIR, NRF, DST, Maize Trust, and Winetech. Significant international networks, gained as President of IUPAC, North Carolina, USA (2002-2003) and of ICC, Vienna, Austria (1992-1994) and as member of review panels of ICSU (The International Science Council, Paris). Extensive experience as author, reviewer and editor of scientific journals and scientific reports, as well as mentor of young researchers. Success in raising funds for research at South African institutions and internationally, e.g. at The Wellcome Trust (London), the Mellon Foundation and the Framework Programs of the EU and NEPAD.