

# *In Memoriam*

## **RUDOLPH DANIËL BIGALKE** **05 May 1931 - 27 January 2024**



Rudolph Daniël Bigalke was born in Pretoria on May 5th 1931, the son of Rudolph C H Bigalke, 1896-1989, a prominent zoologist and conservationist, and Margaretha Aletta née de Bruyn, 1896-1988. Rudolph's sister Margaret Annette was born in 1933 and his parents later adopted another daughter, Friedel.

After schooling at the Deutsche Schule and Afrikaanse Hoër Seunskool, he went on to graduate from Onderstepoort with a BVSc (cum laude) – a very rare achievement – in 1953. Rudolph married Rita Beatrice Oberholzer in 1954 and they had 4 children, 3 daughters and a son, Heinrich Rudolph, who tragically died when he was 19. Rudolph worked as an assistant at a Johannesburg private practice after graduation until 1956, when he was appointed Researcher in the Protozoology Section at the Onderstepoort Veterinary Research Institute. In 1963 and 1964, aided by a Meat Board bursary, he studied Applied Parasitology at the London School of Hygiene and Tropical Medicine and obtained a Diploma, again with distinction.

Early at OVRI, he conducted pioneering research into the protozoan parasite *Besnoitia besnoiti*, the cause of Elephant Skin Disease that can assume serious dimensions in cattle.

His research is still quoted in the literature today. Important useful findings included the epidemiology of the parasite, the wide variety of host animals involved, and the insects responsible for its transmission. Another valuable finding was the discovery that this organism could be grown in tissue culture, which led to the possibility of further research into the organism. In addition, Rudolph determined that rabbits were susceptible to infection which enabled further progress.

Research in wildlife species led to the discovery of a mild strain of the parasite in the Blue Wildebeest, and in time this resulted in the development of an effective vaccine against the disease, the first ever against a tissue-cyst-forming coccidian. This research was crowned by the conferral of a DVSc in 1969.

Rudolph Bigalke also made research contributions to the knowledge of other protozoan parasites, and from 1963 to 1972 he was employed as a part-time lecturer and senior lecturer in Protozoology and Protozoal Diseases to veterinary students. A generation will remember his precise lectures and balanced evaluations.

His administrative and leadership skills were recognised by successive appointments to Assistant Director (1971), Deputy Director (1974) and then as the ninth Director of OVRI in 1980. In this capacity he oversaw the creation of the Foot and Mouth disease research facilities at Kaalplaas and the increased commercialisation of vaccine production, leading later to the creation of Onderstepoort Biological Products. Anticipating changes in his professional life, Rudolph enrolled for and received a Diploma in Advanced Public Administration from the University of Pretoria in 1977.

Further promotions followed in the Department of Agriculture: Chief Director of Animal Production in 1988, Executive Director in 1991 and Deputy Director-General in 1993, which position he held until his official retirement in 1996. He later served as Technical Advisor to the Registrar of Act 36 of 1947 (for Stock Remedies) from 2009 to 2018. These appointments expanded his vision and influence in the agriculture sector and the importance of sustainable approaches to animal disease control.

Rudolph Bigalke's attributes were recognised by a long list of appointments outside the Department. These included the South African Veterinary Association, where he served as an elected member of the Federal Council from 1973 to 1981, the Executive Committee 1977 to 1981, co-opted Federal Councillor 1986 to 1988, Chairman of the History Committee 1996-2008, and an unbroken and unequalled 45 years as a member or Chair of the Awards Committee, from 1979 to 2024. He also served a term as elected President of the Biological Society of South Africa in 1976, from 1979 to 1981 as President of the Parasitological Society of South Africa, and from 1994 to 2000 he was Chair of the Protein Research Trust. In addition, he held many positions in entities including Nature Conservation, Veterinary Technology, the CSIR, ARC, Mammal Research Institute, the Veterinary Faculty, and Trusteeships among others. He served as a peer reviewer or reference for 10 organisations and served on the Editorial Committee of JSAVA from

1970-1974, Koedoe 1987-1994 and OPJVR 1971-2002, as well as Editor of the OPJVR from 1980 to 1988, and as a reviewer of the OIE Bulletin from 1986 to 1988.

Academically, he served as a part-time lecturer and later as an external examiner in Protozoal Diseases from 1973 to 1983, was made an Honorary Professor from 1985 to 1988, and was co-supervisor for 4 post-graduates. Rudolph also organized 3 congresses and undertook 12 scientific visits to foreign countries, delivered 68 papers at national and international congresses, mainly on Protozoology but also on a wide range of other topics. There are 87 scientific articles to his credit, of which 71 were as senior or sole author, 51 dealt with aspects of protozoology and of these, 23 were on besnoitiosis. There were also 19 articles on topics of veterinary history, and he was co-editor of the acclaimed book "Onderstepoort 1908-2008".

He played a crucial role in the establishment and organisation of the SAVA History Committee, where he was Chair from 1996 to 2008, Secretary from 2008 to 2019, and a Director of the successor Veterinary History Society from 2019 to 2024. He also played a major part in establishing the National Veterinary Museum and arrangements for a storeroom for historical items and in events marking the centenary of OVI, including the book, and a Pan-African congress. He created an e-book, archives and a database, and wrote many obituaries and biographies, all very valuable contributions to our veterinary history.

Rudolph was the recipient of 14 awards or recognitions, including Gold Medals from the SAVA (1994) and the Fertiliser Society (1997), Honorary Life Vice-Presidency of SAVA (2014), Fellowship of the Royal Society of South Africa (2004), and a DVSc (honoris causa) from the University of Pretoria in 2008. And in 2020 he received the VHS HH Curson Award for his long-term and excellent contributions to Veterinary History. His knowledge of the history of veterinary science in South Africa was truly exceptional.

He farmed beef cattle near Lindley in the Free State Province. Time spent on Wanganella gave him great pleasure and he was a beloved member of the farming community who recognised him for his implementation of sound sustainable grazing practices and scientific selection of cows and bulls. Nature was a great and enduring inspiration to him, and he spent many happy times in the Kruger National Park with his family.

Rudolph Daniël Bigalke was a pillar of the Veterinary profession, with his legacy of scientific excellence, high work ethic and standards, and unwavering professionalism. We will remember him as a shining example of what can be achieved in a long and productive career of 70 years. He was always ready to help, and his wisdom and sage advice will be sorely missed. To his widow Rita and daughters Carli, Ilse and Alma and their families, we extend our condolences and our heartfelt thanks for their support of Rudolph over the years.

Farewell and thank you, our inspiring and respected friend and colleague.

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Ons, in veearts geledere is almal so dankbaar vir die lang en produktiewe lewe van Rudolph Daniel Bigalke, 'n sprekende voorbeeld van wat 'n professionele man ten goede van sy gemeenskap en die samelewing kan doen. Uitmuntendheid was

altdy die wagwoord. Rudolph matrikuleer in 1848 by die Afrikaanse Hoër Seunsskool, Pretoria in die eerste klas met drie onderskeidings. Daarna ontvang hy die BVSc graad met lof op Onderstepoort in 1953 – baie min veeartse bereik so 'n prestasie.

Na 'n kort tyd in private praktyk, word hy as navorser in Protosoologie te Onderstepoort in 1956 aangestel. Daar begin hy sy baanbrekerswerk op die protosioiese parasiet *Besnoitia besnoiti* wat as oorsaak van Olifantvelsiekte dalk beter bekend staan. Die siekte kan in beeste ernstige afmetings aanneem.

Hierdie studies van Rudolph strek oor dekades en word nog vandag in die literatuur aangehaal. Belangrike en bruikbare inligting oor die epidemiologie of lewenspatroon is ingevorder insluitend die wye reeks gasheer diere en die insekte wat die siekte oordra. Nog 'n waardevolle ontwikkeling was Rudolph se ontdekking dat die organisme in weefsel kultuur gekweek kon word, wat verdere navorsing oor die organisme toegelaat het. Die siekte is ook in 'n reeks laboratorium diere verwek wat die kennis verder verbreed het. Ondersoeke in wild spesies het 'n swak stam in die blou wildebeest ontdek wat tot 'n entstof gelei het. Hierdie navorsing word in 1969 met 'n DVSc graad bekroon.

Rudolph het ook 'n Diploma in Toegepaste Parasitologie (met lof) in Londen in 1964 en 'n Diploma in Gevorderde Landsbestuur te Pretoria Universiteit in 1977 verwerf. 'n Verdere DVSc (honoris causa) is in 2008 aan Rudolph deur sy alma mater toegeken.

In sy werksveld in Protosoologie het Rudolph ook op ander organismes gewerk en bygedra, en hy word opvolgend as Assistent Direkteur in 1971, Adjunk Direkteur in 1974 en Direkteur in 1980 van die Veterinêre Navorsings Instituut te Onderstepoort aangestel.

Verdere bevordering volg met aanstellings as Hoof Direkteur in 1988, Uitvoerende Direkteur in 1991, Departmentshoof in 1992, en Adjunk Direkteur-Generaal in 1993. En na sy uittrede in 1996 dien hy nog as Assistent vir sy opvolger en vir 9 jaar van 2009 to 2018 as Tegnieuse Raadgewer aan die Registrateur van Veemiddels (Wet 36 van 1947).

Betrokkenheid met verskeie ander instansies word weerspieël in die lang lys van posisies wat Rudolph beklee het. In die SA Veearts Vereniging word hy verkies om op die Federale Raad te dien van 1973 to 1981, die Uitvoerende Komitee van 1977 to 1980 en die ongeewenaarde 45 jare van 1979 tot verlede jaar as lid van die Toekennings Komitee en in die Geskiedenis Komitee as Voorsitter van 1996-2008, Sekretaris van 2008 to 2019, en daarna die Veterinêre Geskiedenis Vereniging van 2019 tot 2023 as Direkteur.

Hy dien ook as President van die SA Biologiese Vereniging in 1976 en later die Parasietologiese Vereniging van SA van 1979 tot 1981, en Voorsitter van die Proteïne Navorsings Trust van 1994 tot 2000. Hy dien ook op talle ander wetenskaplike instansies as raadgewer en beoordelaar.

Rudolph is ook betrek vir diens as Redakteur, komiteelid of beoordelaar van onder andere die wetenskaplike SAVV Joernaal en die Onderstepoort Joernaal. Oor die jare onderneem hy 10 wetenskaplike besoeke aan buitelande in Afrika en elders. He reel drie kongresse en lewer 68 voordragte op wetenskaplike nasionale en internasionale vlak kongresse, hoofsaaklik oor Protosoologie maar ook 'n wye veld van ander onderwerpe.

Daar is 87 wetenskaplike artikels op sy rekord, waarvan alles behalwe 16 was hy of senior of enigste outeur; 51 is oor Protosoologie, waarvan 23 oor Olifantsvel siekte gaan. 'n Verbasende 19 artikels is oor veteriniere geskiedenis geskryf. Rudolph is ook mede-Redakteur van die spog-boek "Onderstepoort 1908-2008", en het toegesien dat 'n Nasionale Veteriniere Museum op Onderstepoort gestig is en 'n webwerf oor veteriniere geskiedenis tot stand gebring word.

Rudolph Bigalke het 14 toekennings en erebewyse ontvang, waarvan die Goue Medalje van die SA Veteriniere Vereniging in 1994, die Goue Medalje van die Kunsmisvereniging van SA in 1997, en die Lewenslange Visie-Presidentskap van die SAVV in 2014 veral uitstaan. Hy word ook erken as Socius van die Koninglike Vereniging van SA, en kry die HH Curson Toekenning in 2020 vir sy groot bydraes in veteriniere geskiedenis. Rudolph Daniel Bigalke was inderdaad 'n steunpilaar van die veteriniere beroep.

Sy nalatenskap is een van wetenskaplike uitnemendheid, 'n hoe werksetiek, hoe standaard en 'n onwrikbare professionalisme. Ons onthou hom as 'n sprekende voorbeeld van wat in 'n lang en hoogs produktiewe loopbaan van 70 jaar bereik kan word.

Ons onthou sy bereidwilligheid om altyd te help en waardevolle bydraes te maak. Sy wysheid en goue raad sal lank onthou en vermis word. Ons waardering vir die lewe en bydraes van Rudolph Bigalke is groot en ons sal nie sy gelyke weer sien nie. Ons se baie dankie vir die Bigalke gesin vir die ondersteuning wat oor die jare aan hom toegestaan is.

Rus in vrede, ons Vriend, Kollega en Inspirasie.

*Gareth Bath*