

HOOSEN COOVADIA

TOP THREE AWARDS

- The Order of the Star of South Africa, Class V received from former President Mandela, 1999
- The AAS Award for Advancing Science, Serving Society, 2014
- The ASSAf Science-for-Society Gold Medal, 2004

DEFINING MOMENT

Qualifying as a paediatrician; the growth and improving quality of my publications after the papers in the *Lancet* on measles – my first solo effort, and on malnutrition and immunity [in which I was a foot soldier to my mentor Prof Smythe] (the paper became a citation classic); studying in India; marriage and my children; the 2000 International AIDS Conference which I chaired.

WHAT PEOPLE DO NOT KNOW

Despite some corroding *bourgeois* proclivities, I remain at heart and in mind, an adherent of equity and fairness in all things meaningful, justice for the poor [the rich often look after themselves very well] and the elimination of poverty, with a deep and abiding distrust of the raw capitalism I have witnessed in SA. I have been fortunate, given the modern trend in transient relationships and marriages, in being in love with my wife for over 50 years. I cannot do without reading contemporary high-quality literature.



TAKING UP THE CRUSADE FOR CHILDREN

Hoosen Mahomed Coovadia, known as “Jerry” to those close to him, was born in Durban on 2 August, 1940. Raised in a Muslim family, Coovadia first attended St Anthony’s, a Catholic school in Durban, and completed his secondary schooling at Sastri College. He credits his mother as having been a great influence in his development. Having been brought up by her businessman father, she often accompanied him on his travels, and was extremely fond of reading – an overriding passion shared by her son. Indeed, at the time, Coovadia recalls preferring literature to science, devouring books from his local library in Brook Street.

Growing up as a person of colour in a South Africa that was then in the throes of apartheid, career choices were limited for pupils excelling at a secondary school level: teaching, law, medicine or commerce. The latter was especially prominent when coming from a background of large family-owned and run enterprises, such as the manufacturing business managed by the young Coovadia’s own relations.

Holding strong political views, the ideals of capitalism and business were distasteful to Coovadia. Therefore, despite his relatives’ best efforts to woo him to the family industry, Coovadia insisted on studying medicine. He spent a year at the University of Natal Medical School, a medical school which had originally been founded specifically for African students, but upon receiving too few applications, enrolled Indian and coloured students too. The campus was directly neighboured by the Wentworth Oil Refinery in a building approaching an army barracks. Finding this environment unfavourable for pursuing his studies, he then exchanged Durban for India. Enrolling at the University of Bombay, he spent two years studying science before being accepted to study medicine at the Grant Medical College (GMC). Places at this prestigious institution were extremely hard to come by and competition was fierce, but fortunately he did well enough in the admitting examinations to be given a place directly into GMC; many South Africans entered indirectly as some places were reserved specifical-

ly for South African students of Indian descent. Here, he became involved in politics, espousing the ideals of socialism. A group of like-minded peers formed the South African Students Association, an overtly political body, and often invited speakers on Indian independence, as well as speakers from the African National Congress (ANC). In this period of his life, he met his wife-to-be, Zubeida Hamed, a medical student a few years his junior (now practising as a dermatologist) and hailing from the Western Cape.

Returning to South Africa, he worked as an intern and medical officer, eventually specialising in paediatrics, which he ascribes to serendipity rather than design. His father, he recounts, was unenthusiastic about his desire to remain at the university to pursue academic medicine, believing that the best doctors entered private practice. Appeasing his family, he joined a three-person firm of private specialists – obstetrician, physician and paediatrician – an experience, he declares, that put him off private health care forever. “Nothing,” he recounts, “could convince me that issues of life and death should be exposed to the vagaries of a so-called free market – which of course is rarely ‘free’.” Resigning abruptly from the practice, he took the first job he was offered at the King Edward VIII Hospital in Durban, where he was strongly influenced by a colleague who was an enthusiastic and efficient paediatrician. A defining time in the trajectory of Coovadia’s career, this is where his commitment to paediatrics was cemented and in 1971, he obtained his Fellowship of the College of Physicians from the South African College of Medicine.

Having become interested in issues around immunity in children, Coovadia furthered his studies at the University of Birmingham, completing his MSc in immunology in 1974. He stayed in the UK for a further year as a research fellow, accumulating further research expertise at the Institute of Child Health in London. Returning to South Africa in the mid-1970s, he took up a post at the University of Natal, earning his MD in 1978, upon which he was promoted to the position of senior paediatrician and lecturer. He was awarded a research grant by the Medical Research Council (MRC), and in 1979 was able to spend the year as a postdoctoral fellow at the Walter and Eliza Hall Institute of Medical Research in Melbourne, Australia.

SOCIAL REALITIES

The social realities faced by South Africa spurred Coovadia on to research problems where a real impact could be made at grassroots level, and his specific area of interest was the subject of immunodeficiency in children – which formed the basis of his doctoral thesis. Throughout his career, he has studied a range of aspects related to these concerns, his early research focused specifically on issues around measles, the manner in which immune responses are affected by malnutrition, and immunisation. The work done by Coovadia in this regard has made a considerable contribution to the field of immunity. The value of his findings was highlighted when they were quoted in the World Health Organisation's (WHO) technical report series on immunodeficiency. Furthermore, a paper co-authored with Prof PM Smythe on immunity and malnutrition has become a 'citation classic', regarded as one of the seminal works on the subject. In order to investigate this area, Coovadia worked on animal models of malnutrition. These studies are extensively quoted in current literature on this topic, including a text by the controversial RK Chandra.

In addition to his work on malnutrition and immunodeficiency, Coovadia has also made a significant contribution in the area of paediatric kidney diseases, nephrotic syndrome in particular. While working with children at the King Edward VIII Hospital, he initiated and continued the implementation of renal biopsy techniques in children. He has spent the last two decades in collaboration with Prof Miriam Adhikari (whom he supervised for her doctorate) as well as Dr Bhimma, and together they have collected and published the largest series of work dealing with nephrotic syndrome in Africa. This included the publication of the definitive description of nephrosis in South African black children.

Also observing illnesses specific to the region in which he was practising, Coovadia undertook much research on local childhood diseases. In this regard, Coovadia has published, among others, on issues such as systemic lupus erythematosus (SLE) and poisoning by impila, a plant that is most associated with traditional herbal medicines in Africa.

He has also been much involved in numerous vaccine studies throughout his career, including work on vaccines for measles and acellular pertussis (commonly known as whooping cough). He has also studied at length the effect of Vitamin A supplements on immunity to measles and other infections.

In 1986, he was made Professor of Paediatrics and Child Health at the University of Natal, where he was later appointed as Professor and Head of Department. Here he was pivotal in assembling a group of dedicated, renowned researchers and scholars in the field. In this time, the seeds for the work which have made him particularly prominent in South African medical research were sown when, in 1989, the first child diagnosed with HIV/AIDS was admitted to his hospital ward. Soon the wards were flooded with similar cases, and Coovadia was forced to re-examine the prevalent stereotypes of HIV/AIDS as affecting only homosexual, white patients. Receiving funding from UNAIDS (the Joint United Nations Programme on HIV/AIDS), Coovadia spearheaded a research group examining the phenomenon of mother-to-child transmission of HIV/AIDS. Much of his subsequent research has built on this foundation, particularly with reference to the context of Africa and developing nations. He has often collaborated with Prof Anna Coutsooudis, another former PhD student. Coovadia has become prominent as an activist in this regard, and influential in the dialogue around related South African policymaking.

Upon his retirement in 2001, Coovadia was appointed as the Victor Daitz Professor in HIV/AIDS Research, and in 2007 took up the post of Scientific Director at the Doris Duke Medical Research Institute of the UKZN. He now holds the position of Director at MatCH Health Systems, dealing with Maternal, Adolescent and Child Health, under the auspices of the University of the Witwatersrand. He maintains close ties to UKZN, where he is Emeritus Professor of Paediatrics and Child Health, and also a Research Associate of CAPRISA – the Centre for the Aids Programme of Research in South Africa.

POLITICAL INTERESTS

In addition to his illustrious career as a medical researcher, Coovadia gained prominence through his involvement in South African politics. In

the 1970s, Coovadia joined the Natal Indian Congress, a party which had been revived by Mewa Ramgobin. Beginning in the Overport branch, he was soon speaking at meetings, going on to join the leadership of the party and being elected Vice-President. He also became a leading member of the United Democratic Front (UDF), where he was part of a delegation to Lusaka, participating in meetings with the ANC prior to the unbanning thereof. He was active in the preliminary discussions and negotiations at the Congress for a Democratic South Africa (CODESA). He sat on the executive of the National Medical and Dental Association (NAMDA), an organisation of progressive doctors established after the complicity by doctors in the security police torture and subsequent death of Steve Biko was revealed. Coovadia, like many others, fell victim to political harassment, and security police bombed his home while his wife and children were inside. Fortunately, they were not harmed. This was not the case with some of his fellow activists and friends. Although he later returned to medicine completely, Coovadia has been active in government, assisting in shaping policies around health care when approached, and has been active in campaigning for the improvement of these policies, especially in connection with the HIV/AIDS pandemic.

Throughout his career, Coovadia has devoted much of his considerable energies to participation in the academic and professional community. He has been part of diverse committees of UKZN, acted as a consultant for UNAIDS on HIV research standards. He is among others a Founder Member and long-serving member of the Council of the Academy of Science of South Africa (ASSAf), a Fellow of the Royal Society of South Africa, an Honorary Lifetime Member of the International Association of

Physicians in AIDS Care (IAPAC), and acts as chairperson for the Steering Committee of the Isisombululo Programme as well as the FPD (Foundation for Professional Development).

In his capacity as an academic, Coovadia taught both at undergraduate and postgraduate levels in medicine, nursing and other health sciences for over 30 years, and was involved in innovation in medical education and training at local and national level.



Having become a world leader in his chosen profession, one thing has remained constant: he still is an avid reader, fond of novels and political accounts which he makes time for every day.

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.

[Online] Available at: DOI <http://dx.doi.org/10.17159/assaf.2016/0012>

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