

## PERSONALITY PROFILE

# REMEMBERING THE BEGINNING

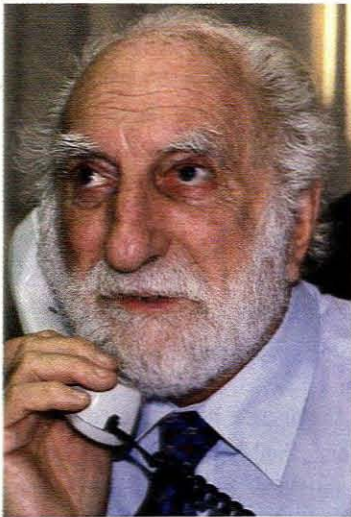
A son of Johannesburg, born 16 June 1929, Professor Ruben Sher is most widely known as Head of the AIDS Research Unit at the South African Institute for Medical Research (SAIMR), Johannesburg. A pioneer in AIDS research, he was a founder member of many South African AIDS bodies, including the Southern African HIV Clinicians Society.

Before becoming the local media's medical face of AIDS, he was a pill-counter, served as a pilot in the infant Israel, completed a PhD, registered as a specialist pathologist (microbiology), and qualified as a sangoma.

Currently Director of HIVCARE International, he has held seven academic appointments and served as principal investigator on six major HIV studies.

Ruben is recipient of many accolades including the Wits Alumni Honour Award in 1987 for rendering exceptional service to the community, both the Paul Harris Fellowship and the Vocational Service Award from Rotary in the early 1990s, and the Salus Award (Silver) from the Department of Health in 1993.

He is married, with 4 children and 5.5 grandchildren spread throughout the Diaspora, including New York and Toronto.



After an unsuccessful application to the University of the Witwatersrand Medical School in 1947, Ruben marked time as a pharmacist (his second choice) before joining a number of other young South African, British and American Zionists training as pilots for the defence of the newly

established state of Israel. His active service, . . . mostly ferrying paratroopers and military goods in B17s, Dakotas, Stearmans and Rapides (fitted out like small ambulances), continued until 1953.

He returned home older, wiser and armed with a loan from the Zionist Federation, to knock again at Wits's Medical School door, this time successfully. As a reward for 6 years of unremitting study came the mandatory period of hard labour and sleep deprivation which seems to be an integral part of medical training worldwide. After his internship Ruben did some time as a general practitioner and later became medical officer at the Johannesburg Fever Hospital.

Ruben says that his subsequent intense interest in pathology was largely the result of a rare

thrombocytopenic condition which his son developed. In 1980 he gained a PhD from Wits and registered as a microbiologist in 1984.

### 'A NEW DISEASE'

While visiting a number of USA cities in the early 1980s, Ruben heard of a 'new disease' afflicting gay men. He travelled to Atlanta, Georgia, where he met with members of the Centers for Disease Control (CDC) and other US pioneers in the AIDS field. He voiced his concern about gay men working for South African Airways and frequenting USA gay establishments – what was the likelihood of their becoming infected? On his return to South Africa Ruben offered to research the local incidence of AIDS by taking histories and bloods from, and following up, a small group of 250 gay men.

### 'NEVER THROW BLOOD AWAY'

The bubble really burst in 1985 after a blood test became available that could detect HIV infection. Stored bloods taken from the group in 1983 were tested. Results showed that 11% of the group had been infected at the time of giving blood. Two men, employees of South African Airways, had died in the interim. Following calls to Professor Koornhof and Ruben Sher in this regard, *Beeld* published a front-page article on HIV accompanied by a photograph of the face that was to become synonymous with the battle against HIV/AIDS – that of Professor Ruben Sher.

Ruben and his small group of supportive colleagues saw increasing numbers of gay men become sick as a result of this disease. In response, Reuben started a centre for AIDS at the SAIMR where he recalls working closely with Dr Dennis Sifris, a well-known Johannesburg general practitioner. The two men offered educational talks providing slides and visuals.

#### FIRST INTERNATIONAL AIDS CONFERENCE

In 1985 the first international conference on HIV took place in Atlanta. Gay men manned the few stands and distributed pamphlets to the 2 000 delegates, mostly medical scientists. Ruben, the only South African to attend, remembers a young gay doctor who was dying of AIDS being given a standing ovation after his presentation.

Those of us fortunate enough to have attended the AIDS 2000 Conference in Durban last year recall a city filled to capacity with medical professionals of every discipline, impressive opening and closing ceremonies, a poor response from government, and an exceedingly informed and moving presentation by Judge Cameron.

In 1986 the National Institute of Virology (NIV) joined the arena by testing serum that had been taken from the mining community during the period 1970 - 1974. They found no evidence of HIV in mineworkers originating from a variety of SADC countries including Angola, Zambia and Malawi. In the same year, a major study involving 30 000 mineworkers revealed a 3.76% HIV incidence in Malawians from the same group.

#### LONE RANGERS

Ruben remembers the next 2 - 5 years as a period during which few doctors were prepared to get involved in what had become almost a lone crusade. During these difficult 'apartheid days' Ruben recalls, with gratitude, how he managed to cultivate and maintain friendships with experts in the UK, France and the USA (the CDC, and the National Institutes of Health (NIH)) in an attempt to find answers to pressing HIV questions.

Ruben had by now established the first HIV clinics, first at Johannesburg Hospital, followed by the Hillbrow Hospital Clinic in 1988/89.

The nightmare of HIV exposed the death throes of an intolerant and conservative apartheid South Africa. The disease was stigmatised by the 'type of people' who transmitted it and vilified by the 'immoral means of transmission' - collectively creating a press bonanza.

Unwittingly Ruben Sher had become the darling of the media.

#### AIDS ADVISORY GROUP

Only a small handful of local experts were able to respond to the growing crisis. In anticipation of the looming pandemic they formed the 'AIDS Advisory Group' to educate and inform colleagues and other health professionals, stimulate local research and try to find local solutions to the pressing problems of service delivery and attitudes. Professor Jack Metz was chairman and members included Professor Barry Schoub, Professor Anton Heynes, Professor John Moodie, Professor Tom Bothwell, Dr M Hendricks, Dr Leon du Toit, Dr J H Lombard, Dr Horst Küstner, Dr Coco du Plessis, Professor Denis Pudifin, Professor N Padayachie and Dr F Spracklen.

Public recognition was shown to Ruben in the form of a convocation medal for services to humanity from the University of Witwatersrand.

#### ON GOVERNMENT RESPONSE

'I think the government is doing very little in terms of contributing. It is not just about wearing a red ribbon. It is about action: mass education; medical professional training; destigmatisation, and service provision. Never mind a State of Emergency they should declare a State of War against AIDS!

'They are rejecting pharmaceutical companies' heavily cut-priced antiretrovirals, e.g. the Boehringer and GlaxoSmithKline offers.

'There are 1 600 new infections a day!

'To complicate matters the disease has attracted too many inappropriate opportunists hell-bent on empire building with no desire to put something back into the community.'

#### ON OFFERING SOLUTIONS

'I think locally designed educational programmes are very important - the models that we used at the beginning were designed for US white, gay men not heterosexual people with very different customs and value systems. Local education should include local leaders, sangomas and African practices, e.g. non-penetrative sex.

'Medical schools should invest more time on compulsory AIDS training courses, and communities should be independent and critical of political policies and make their needs heard at senior government level.'

## VACCINES

# COLLABORATION BETWEEN ITALIAN AND SOUTH AFRICAN SCIENTISTS ON A TAT-BASED HIV VACCINE

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South African HIV Vaccine Action Campaign (SA HIVAC)

The urgent need to find an effective HIV vaccine, and the challenges this presents, have forced scientists to investigate various innovative approaches. Most of the attempts made in the last 15 years have focused on the structural proteins of HIV aiming at inducing immunity by blocking virus entry. However, the failure of this approach so far has led some scientists to investigate strategies aimed at controlling viral replication and blocking disease

onset. Recent approaches aimed at eliciting immunity against the HIV regulatory gene products *tat*, *rev* and *nef* have shown good results. Tat vaccination appears capable of controlling primary infection with highly pathogenic SHIV (simian HIV) viruses providing evidence of cross-protection in non-human primates. The *tat* gene is relatively well conserved in its immunogenic regions among most subtypes of HIV-1 and therefore may lead to the development of a vaccine that could be used globally.

### THERAPEUTIC VACCINES

HIV vaccines can be preventive (preventing infection in the first place) or therapeutic (slowing down disease progression in infected individuals by keeping viral load low and CD4 counts high) or both. Most research so far has been aimed at developing a safe, effective, preventive vaccine for use in HIV-negative individuals to prevent infection. However, there is also a focus on developing a safe, cross-subtype reactive, therapeutic HIV vaccine that can be used in people who are already infected.

Therapeutic vaccines are particularly important for South Africa because there are already large numbers of people living with HIV (the latest antenatal survey results estimate that 4.7 million, or one in nine, South Africans are already infected), who are unable to access expensive antiretroviral treatments.

### COLLABORATION

Bilateral South African-Italian collaborative projects were established last year to accumulate baseline data on the possible use of a tat-based preventive and therapeutic HIV vaccine in South Africa. These projects were funded by the South African AIDS Vaccine Initiative (SAAVI).

Currently in development is a new collaborative application to be submitted to UNAIDS by the Istituto Superiore di Sanita (ISS), the HIV/AIDS Vaccine Division at the Perinatal HIV Research Unit (PHRU) in Soweto and the Medical Research Council in Durban to expand the existing collaboration and begin preparing South African sites for phase II clinical testing of a tat-based vaccine. The overall principal investigator is Dr Barbara Ensoli from the ISS, and the principal investigators from the two South African sites are Dr Eftyhia Vardas, Director of the HIV/AIDS Vaccine Division at the PHRU, and Dr Mark Colvin of the MRC.

'It was decided to have two independent South African sites because of the potential biological diversity of the Soweto and Durban populations and probable virological diversity,' says Dr Vardas.

It is hoped that phase I trials will be done first in Rome at the ISS towards the end of 2001. If the vaccine is found to be safe, phase II trials could begin soon after in South Africa and Italy.

The South African sites will do both preventive and therapeutic phase II trials, while the ISS will probably only do the preventive phase II trial.

'Separate trial enrolment requirements are required to be able to measure the preventative and therapeutic outcomes of the vaccine, i.e. negative and positive

