What can South Africa contribute to the AIDS epidemic?

Next month, Malagapuru William Makgoba, professor of pathology at the University of Witwatersrand, will begin a three month co-government of the Medical Research Council (MRC) of South Africa with MRC president Walter Prozesky, before taking over the position officially on January 1st 1999.

Although he has made the transition from Transvaal sheep-herder to physician with a Ph.D. from Oxford University, UK and author of several *Nature* papers, the task Makgoba now faces is daunting. As leader of the best established statutory research body in sub-Saharan Africa—a region that harbors 90 percent of the world's HIV/AIDS population and where patients have no access to antiretroviral drugs unless they are pregnant women participating in AZT vertical transmission trials—Makgoba must develop a coherent strategy for dealing with the epidemic. And he must achieve this within the first 18 months of his five-year term, if not before, because in July 2000 the world's attention will be focused more sharply than ever on southern Africa, as attendees of the 13th World AIDS meeting converge on Durban.

Fortunately, Makgoba will have new support from three key areas. There is now a clear political commitment to fighting the disease. Six months ago, an Inter-governmental Committee on AIDS, chaired by Deputy President Thabo Mbeki, was created to coordinate all facets of AIDS-related healthcare, prevention, surveillance and research. Such is the level of new political awareness that President Nelson Mandela has made himself available for World AIDS day on December 1st.

Secondly, if current discussions of a proposal by French AIDS researcher Luc Montagnier to open a R40 million (US\$6.7 million) HIV research center are successful, the MRC and Makgoba will be charged with managing an internationally high-profile research site in South Africa.

Thirdly, Makgoba will take office one year after a review of the MRC by an international commission, which concluded that the MRC, in comparison with other science councils, is an important structure and should be strengthened by a four-fold

increase in government funding.

But the MRC's prospects have not always been so promising. Ten years ago, it was a behemoth of an apartheid organization that was lumbering, top-heavy and without an effective program of internal research. And although every research organization, except perhaps the US National Institutes of Health, pleads underfunding, the problem in South Africa was serious enough to threaten the very basis of scientific research.

However, in 1994, the new government brought with it a change in MRC leadership that proved to be so effective that the international review of South Africa's eight science councils requested by the department of Arts, Culture, Science and Technology in November 1997 declared: "In the last three years, the MRC has undergone substantial transformation." The review committee, chaired by Alan Aderem, professor of immunology at the University of Washington, recommended that the MRC strengthen the university research system by moving resources from intramural programs. "South Africa's scientific infrastructure, particularly in the universities, is very well established and there are some outstanding scientists there," Aderem told *Nature Medicine*. The recommended four-fold increase in government funding was based on evaluations of other science budgets from which money could be transferred. "The money is there and would be

well spent, but there are also programs that build houses, etc. who could also make a compelling argument to put their hands on this money," says Aderem.

The new budget is expected to be announced by November. In 1998, MRC funds topped R100 million (US\$16.67 million) for the first time—20 per-

cent of this raised through contract research or funding from international sources. The R15 million spent on HIV/AIDS research is derived from the following sources: R2.8million from the government; R4.5 million from the National Department of Health as a one-off payment to develop a national HIV and STD surveillance system; R5 million from the NIH's HIVNET program; R1.7 million from UNAIDS for micro-

bicide and perinatal transmission trials and R1 million from the Wellcome Trust for a community-based study on migrancy and HIV.

Although much is made in the western media of lowering the cost of triple therapy drugs to make them accessible for Africa, researchers there are not relying on this and do not view the drugs as a solution to the continent's AIDS problem, largely because of the degree of compliance they require. "We have decided on vaccination as the only logical way of handling the problem," says Prozesky, who adds "we'll carry on giving out condoms and education and try to treat pregnant mothers, but this is just a band-aid."

A national meeting in Pretoria last month confirmed this view but concluded that vaccines developed in the west are inappropriate for Africa because they target HIV clade B, rather than the most common African clade, clade C. "As much as there have been reports of cross-reactive immune responses between the clades, they are not convincing," says Makgoba, who believes that South Africa has the capacity to develop its own vaccine—most likely through the Montagnier Institute if this gets the go-ahead—to be used throughout the continent. A task force has been appointed to head-up the vaccine initiative and through the US NIH HIVNET program, five sites are being established as AIDS vaccine test centers.

Finally, South Africa is also redressing its deficit of public health researchers. After being disbanded in 1994 following the departure of the director, the National AIDS Program—a group focused on public health—was reconstituted in June by the MRC within the Centre for Epidemiological Research in South Africa. Faced with an infection rate of 30 percent in pregnant women, new director Dave Wilkinson's first job will be to implement a national program to reduce mother-to-child transmission using AZT and formula feeding. "We estimate that this will cost only one percent of the national health budget, or US\$35 million, to cover the country."

While the cure for HIV is unlikely to come from South Africa, many associated with the country believe that it is finally poised to make a real contribution to the effort.

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