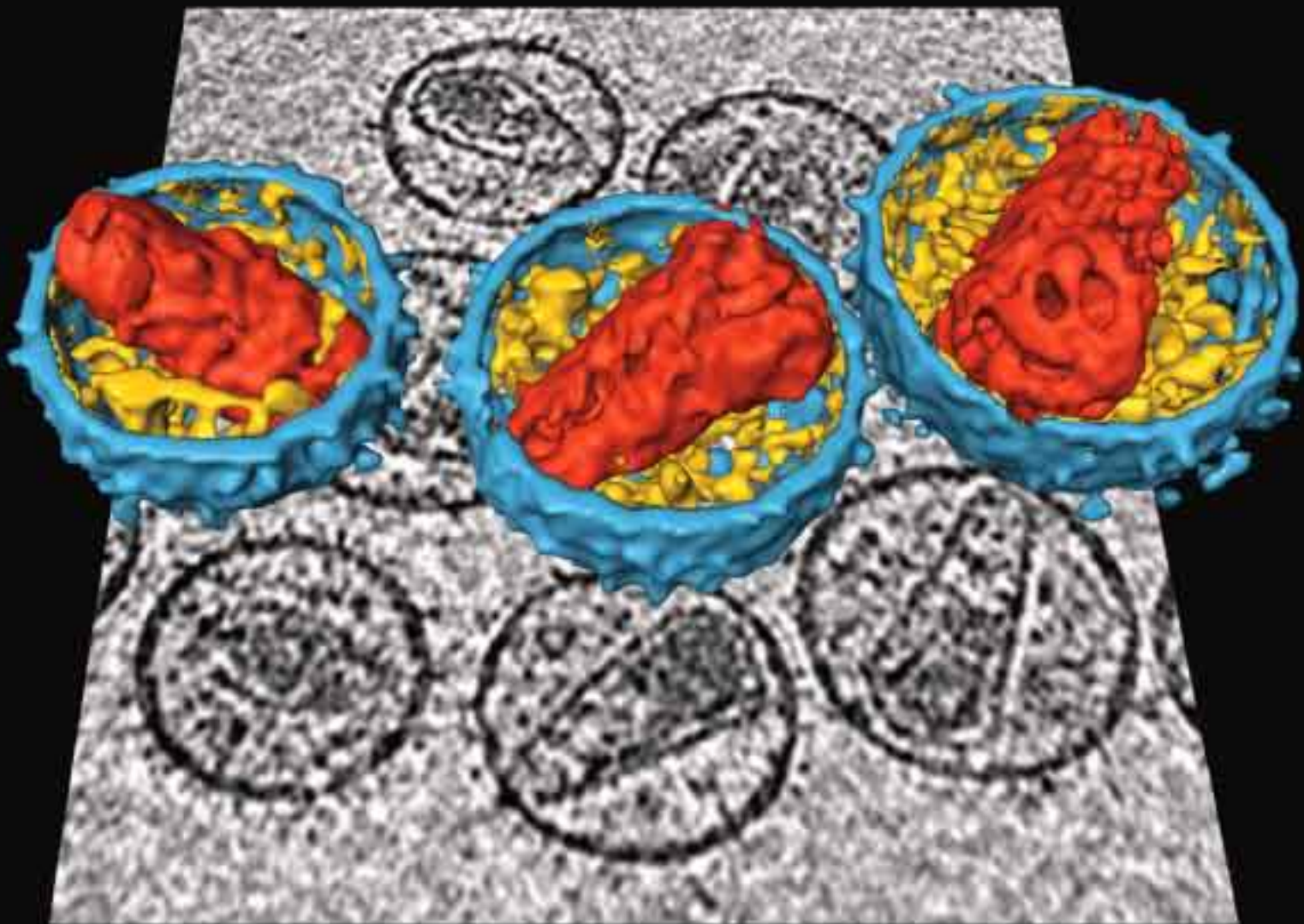


EQUAL TREATMENT

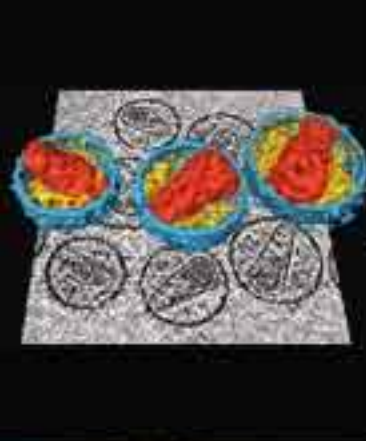
NEWSLETTER OF THE TREATMENT ACTION CAMPAIGN

MARCH 2006

The Science of HIV/AIDS



Three-dimensional image of HIV



This month's front cover is a series of three-dimensional images of HIV constructed from dozens of photographs (electron micrographs) of HIV. Courtesy of Stephen Fuller, Centre for Human Genetics, University of Oxford.

Refines: Briggs J.A., Grimsdale R., Glas B., Foster P., Krawinkel H.G., and Fuller S.D. (2006). The Mechanism of HIV-1 core assembly. *Structure* 14, 15-20.



TAC members in Khayelitsha march against violence against women in December following the murder of TAC member Nandipha Matsheke. Photo: Nathan Ford.



Eastern Cape TAC members completed a course on HIV counselling. Photo: Skhumbule Hambani.



Eastern Cape TAC members study HIV treatment literacy in a shack. Photo: Skhumbule Hambani.

EQUAL TREATMENT

March 2006
Issue 19

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TAC is committed to providing people with HIV/AIDS, their families and caregivers accurate information about life-saving medicines and treatment. However TAC and its leaders are independent of the pharmaceutical industry and have no financial interests with it.



editorial

SCIENCE AND HUMAN RIGHTS

Science enables us to know many things with confidence. With regard to HIV, we know that it causes AIDS, antiretrovirals save lives, condoms prevent infection and nutrition is important to maintain health.

This month's cover is a three-dimensional image of HIV. It was published in January in a scientific journal called *Structure*. HIV has been photographed many times, but this is the first three-dimensional view of HIV constructed from photos of HIV. Technology enables us today to take photos of something so small: 1,000 viruses in a line are the breadth of a human hair!

But in many communities we work with, disease is not understood to be the result of a germ. An old woman in Qumbu said we must cover our noses, because "AIDS comes from the wind, like TB. Your enemies can send this thing to you." To this woman, the front cover would look like a drawing by an artist, not the virus that brings so much illness to our communities.

Many ask, whose science is it anyway? Why should we listen to a way of understanding the world imposed on us by the West? But science is not Western or mysterious: we can all learn science and benefit from it.

President Mbeki has questioned whether AIDS is caused by a single virus called HIV. He joined AIDS denialists who question the "single-germ theory" as well as whether antiretrovirals are effective treatments.

Our president is right to point out that we must aim to address the social, economic and psychological aspects of the epidemic as well as its biology. But our president has a duty to make antiretrovirals available to people with AIDS at the same time that he implements a plan to end poverty. It is a human rights violation to refuse to provide medicines which save lives. We need the basic conditions of living guaranteed by the Constitution including, water, electricity, education, houses, etc. But we also need antiretroviral treatment for people with AIDS; now, not tomorrow.

In this issue, we show a small part of the evidence that HIV causes AIDS and that antiretrovirals save lives. We hope it is enough to give our readers a basic understanding of how we know these facts.

Some scientists during colonial times and apartheid misused science to claim that black people are inferior: we have a justified mistrust of the scientific community. TAC is also concerned that scientists in the West get much more research and training funding than developing world scientists. We therefore support government's investment in building infrastructure for scientific research, including research of

traditional medicines. This must be done on a large scale to address inequalities between rich and poor countries.

But we cannot discard science and its benefits that are rightfully ours because of our mistrust. We would only disadvantage ourselves. We would lose science's benefits including knowledge, antiretroviral treatment, HIV-tests, medicines for TB, electricity, flush toilets, comfortable clothes, radios and televisions.

It is our duty to make science ethical. Ensuring that science is conducted in a world with more respect for human dignity and rights would mean that the material benefits of science would be better distributed.

It would also mean more research into finding new TB drugs and medicines for other developing world diseases and that every person with AIDS would be able to access antiretroviral treatment. It would mean less poverty.

Science, human rights and good governance can make the world a better place. This is why we must protect all these things. If they are undermined, our country's development will falter. Ordinary citizens must make sure that government respects science and our rights and that it ensures that scientific and technological advances benefit all.

Science must be held to account for its inadequacies. But we must not allow our own government to misuse legitimate questions about science to refuse us our rights. TAC's treatment literacy programme works to demystify science. Join our community activists in discovering the common sense of science.

Isience le yeyethu nangoku!

Siphso Mthathi
TAC General Secretary

HOW WE KNOW THAT HIV CAUSES AIDS

by Nathan Geffen

People who develop AIDS are infected with HIV. People without HIV do not get AIDS. This is irrespective of their country, income, race, age, who they have sex with and whether they drink, smoke or use drugs.

Over time the immune systems of most people with HIV become worse, unless they are treated. They lose CD4 cells which help protect the body from disease. They become more likely than HIV-negative people to get one or more of about 30 diseases. Eventually, their CD4 cells become so low that they

become very sick. This is AIDS. Left untreated, more than half of people with AIDS die within two years.

Only HIV predicts AIDS

Only people with HIV develop AIDS. No other factor on its own, including drug use, diet or

poverty, is sufficient to cause AIDS. For example:

- Street drugs cannot be the cause of AIDS: A US study found that people who used cocaine, heroin, dagga and poppers did not develop AIDS unless they were HIV-positive.
- Laboratory workers who contracted HIV have developed AIDS. No other proposed causes of AIDS were applicable to them.
- A Canadian study followed more than 700 gay men for eight years. Only those that contracted HIV developed AIDS.
- Malnutrition and poverty cannot be the cause of AIDS, although they do speed up the time that people with HIV develop AIDS or die. Not a single study has shown that AIDS develops in poor people who do not have HIV. Many well-off people have died of AIDS. One Ugandan study actually showed that poverty is not the cause of AIDS: it found a higher death-rate from AIDS among civil servants and well-educated people.
- Studies among people who receive blood transfusions, children and sex workers have also shown that only having HIV predicts AIDS.

Studies have compared HIV-positive to HIV-negative people and found that HIV-positive people are more likely to get sick or die. Here are a few examples:

- A US study showed that people with HIV were one thousand times more likely than people without HIV to get a disease associated with AIDS.
- A one-year South African study of 1,792 HIV-positive and 2,970 HIV-negative gold miners found that miners with HIV were nearly three times more likely to be hospitalised and nine times more likely to die.
- Researchers at Chris Hani Baragwanath Hospital in Johannesburg looked at deaths of HIV-positive and HIV-negative children between 1992 and 1996. They found that deaths increased among HIV-positive children but decreased among HIV-negative ones.
- A study in Uganda of nearly 20,000 people found that HIV-positive people had a death rate twenty times higher than HIV-negative people.
- In Cote d'Ivoire, HIV-positive people with TB were 17 times more likely to die within six months than HIV-negative people with TB.
- A study in Rwanda found that death was 21 times higher for HIV-positive children than for HIV-negative children.



- Studies also show that people with more HIV in their bodies are more likely to have AIDS. Nearly everyone with HIV shows some progression towards AIDS. An example of this is a study from Sweden. Scientists followed 461 people with HIV from 1986 to 1993. More than half died by 1993. Only 27 patients (5%) showed no signs of progression to AIDS. The scientists then followed 20 of these 27 patients for another four years. The immune systems of twelve of them got worse.

Another study of more than 500 men in San Francisco found that nearly 70% developed AIDS within 14 years of infection. Only 8% showed no progression to AIDS. But even this small number of people had worse CD4 counts than HIV-negative men.

Studies from different countries, including in Africa, show that half of people with HIV develop AIDS within ten to twelve years of being infected if they are not treated.

Based on various studies, scientists think that about three percent of

people with HIV take a very long time to progress to AIDS or do not progress at all.

Studies have shown that most children who develop AIDS are born to HIV-infected mothers. The higher the viral load in the mother, the greater the risk of the child becoming infected.

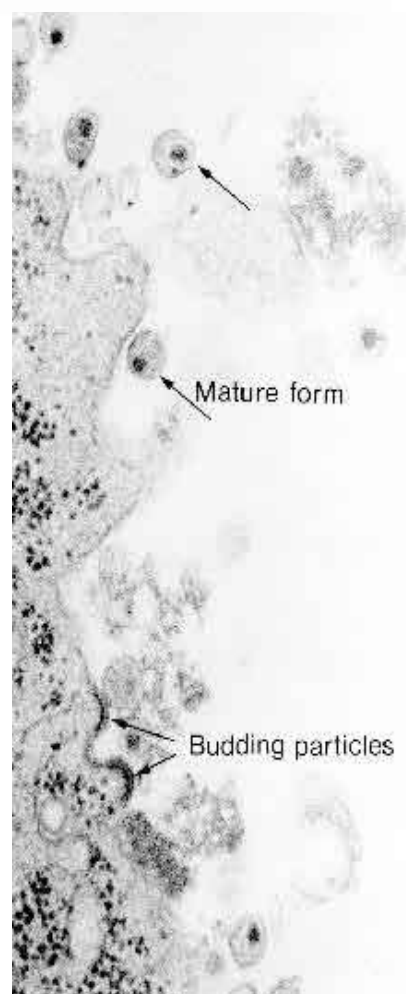
Scientists understand how HIV works

In scientific laboratories, HIV has been photographed numerous times. The picture on this page is an example. HIV has been photographed entering and exiting CD4 cells.

Laboratory scientists have also shown the life-cycle of HIV, how it infects a CD4 cell and then reproduces, often killing the CD4 cell in the process.

Sources

The complete list of sources for the articles in the focus section can be found on page 19.



Electron microscope photograph of HIV particles near CD4 cell.

Courtesy of CDC/PHIL.

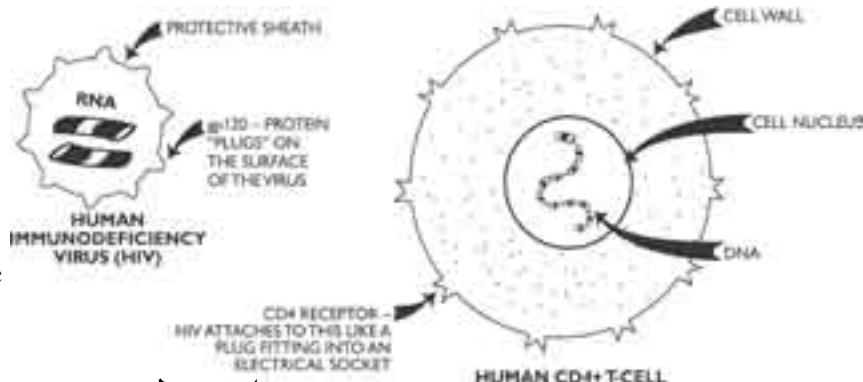
HOW HIV WORKS

text by Paul Sonenthal

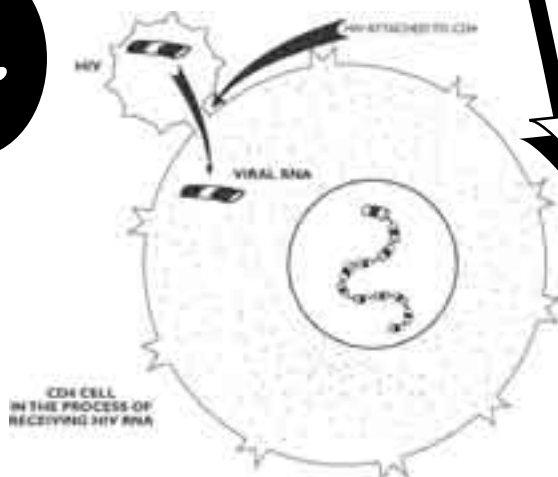
illustrations by Trygve Eng Kielland

Between 1983 and 1984 three laboratories worked towards discovering HIV, the virus that causes AIDS. These laboratories, the Pasteur Institute in France, the National Cancer Institute in the United States and the Cancer Research Institute at the University of California San Francisco, all discovered different variations of what became known as the Human Immunodeficiency Virus (HIV). HIV is very small, about one thousandth the size of a human hair. It can only be viewed with an electron microscope.

1. HIV is constructed like other viruses. Its genetic material is in the middle. This genetic material is called ribonucleic acid (RNA). RNA contains the information used to make copies of the virus. The virus is surrounded by a protective sheath.



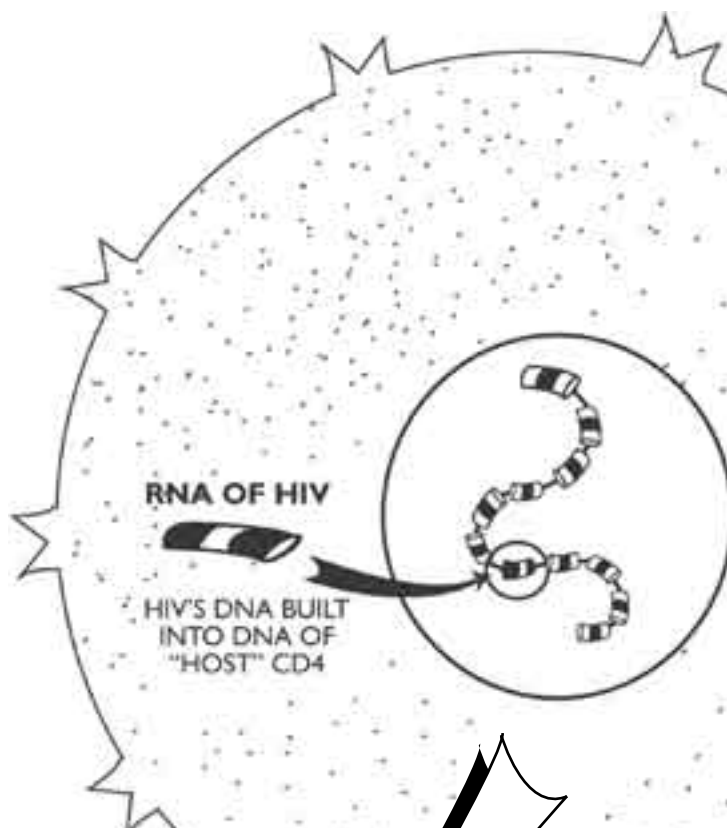
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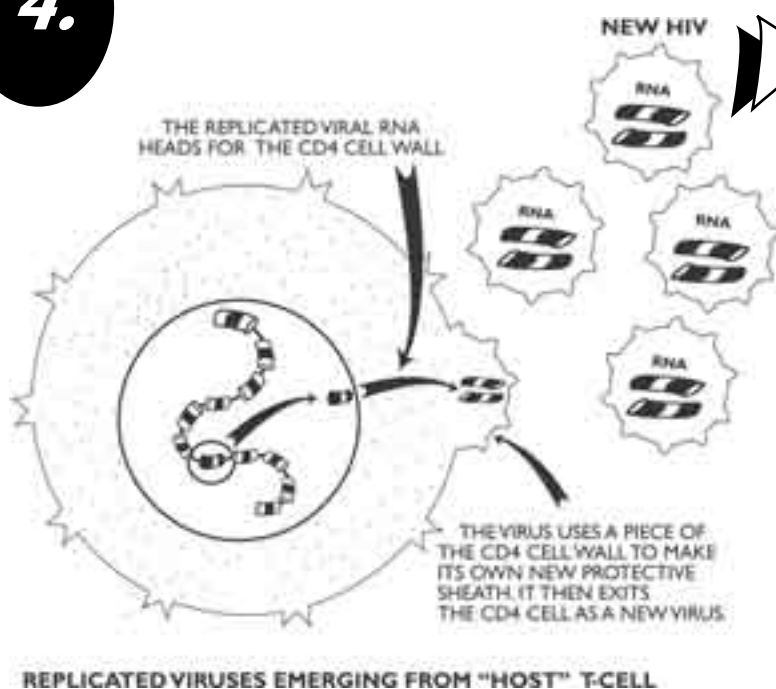
The body contains CD4 cells which are essential for the immune system to function properly. HIV has a protein called gp120 on its surface which attaches to CD4 cells. It then enters the cell.

3.

Once inside the cell, a viral enzyme called *reverse transcriptase* changes the HIV RNA into DNA. This DNA then becomes part of the DNA of the CD4 cell. Cells use DNA to copy themselves and to make proteins. But the DNA of the CD4 cell in the picture now also contains viral DNA that will be used to make copies of the virus.



4.



The cell creates copies of the viral RNA. The parts of the viruses then assemble into complete viruses and exit the CD4 cell.

These diagrams have been greatly simplified. To understand better how HIV works, see the following two excellent websites:

- *How AIDS Works* - <http://health.howstuffworks.com/aids.htm>
- *The Biology of AIDS* - http://news.bbc.co.uk/1/shared/spl/hi/africa/03/biology_of_aids/html/default.stm

HOW WE KNOW HIV TESTS ARE ACCURATE

by Rishi Manchanda and Shilpa Sayana

When you go to a clinic for an HIV-test, the test usually does not look directly for HIV. Instead it looks for HIV-antibodies. Antibodies are disease-fighting proteins created by the body when it is infected with HIV.

HIV-antibody tests are very accurate. For example, a study conducted in the United States in 1993 found that in more than 230,000 AIDS cases, fewer than 170 did not test HIV-positive. This is incredibly accurate. Tests have become even more accurate since 1993.

The HIV antibody test has a window period. This can last as long as three months. During this time people with HIV have no antibodies in their blood that can be detected. However someone may already have high levels of HIV in their system. This increases the chance that HIV can be passed to another person, even though an HIV test may not show that a person has HIV.

When a mother with HIV gives



Photo: www.accesshivcare.org

The Determine HIV rapid test gives accurate results within 20 minutes. A trained nurse can do this test.

In an analysis of 230,000 people diagnosed with AIDS in the United States, only 170 did not test HIV-positive. HIV tests are incredibly accurate.

birth, her baby may be HIV-negative but still have the mother's antibodies in its blood. Babies who are not infected lose their mother's antibodies by the time they are around 18 months old. That is why an HIV antibody test is not accurate for babies under 18 months. A different test, called the polymerase chain reaction test (PCR), looks for the virus itself and not the antibodies. This means that the PCR test is the only reliable HIV test in babies less than 18 months old. The PCR test is accurate from when the baby is six weeks old.

The accuracy of any HIV test depends on two capabilities:

- It should indicate that people with HIV antibodies are HIV-positive.
- It should indicate that people without HIV antibodies are HIV-negative.

For example, the *Determine* rapid test, used widely in South Africa, was tested on blood samples in the Western Cape. It was able to correctly detect 491 out of 493

samples with HIV. It also correctly identified 101 out of 103 samples that did not have HIV. This means that the test was 99.6% accurate in detecting truly positive results and 98% accurate in detecting results that were truly negative. It has also been tested in Kwazulu-Natal where it scored even better.

If two different types of HIV test are used to confirm if someone is HIV-positive the chance of a wrong result is very small. That is why if someone tests HIV-positive, they should be re-tested with a different test. Only if both tests are positive should the person be considered HIV-positive.

The accuracy of an HIV antibody test depends on two capabilities:

- It should indicate that people with HIV antibodies are HIV-positive.
- It should indicate that people without HIV antibodies are HIV-negative.



Picture: www.aids-india.org

An ELISA HIV test. This is a very accurate test. It must be done in a laboratory.

HOW WE KNOW THERE IS AN HIV EPIDEMIC IN SOUTH AFRICA

by Olive Shisana

There is no doubt that HIV/AIDS is one of the key challenges facing our society. Our country is experiencing one of the world's most rapidly progressing HIV/AIDS epidemics. There is a lot of evidence of this from a variety of sources using different methodologies.

The main source of information about the epidemic is the antenatal clinic HIV surveys conducted by the South African Department of Health. The latest study estimated that 29.5% of pregnant women were living with HIV in 2004. This study was based on testing blood samples of more than 16,000 women attending antenatal clinics across all nine provinces.

In 2002, the Nelson-Mandela/HSRC study of HIV/AIDS reported that 11.4% of South Africans were living with the virus. A follow-up study by the HSRC found that 10.8% of all South Africans over the age of two years were living with HIV in 2005. Among those between 15 and 49 years old, the estimated HIV prevalence was 16.2% in 2005. The survey overcomes the limitations of antenatal data, which focuses only on pregnant women. It has its own limitations because it excludes those who refuse to participate. Nevertheless the estimates are reliable, because the survey includes a large number of people from each geographical area, racial and other social groups.

HIV prevalence is higher in females (13.3%) than in males (8.2%). The gender bias still remains and women are more affected by the epidemic. In 2002 we identified the problem of HIV among children for the first time. Prior to that, studies had focused on the prevention of mother to child transmission on children under five years of age. The 2005 study confirmed HIV prevalence amongst children aged five to nine years. Much remains to be done to understand the reasons why so many children are infected, which may include sexual abuse.

Studies using modelling come to similar conclusions. For example, the ASSA2003 model produced by the Centre for Actuarial Research, uses a number of assumptions, antenatal data and population-based HIV prevalence data. It calculates that 5.2 million people live with HIV in South Africa.

There is evidence from many sources showing beyond reasonable doubt that South Africa has a massive HIV epidemic.

A report from Stats SA in 2005 found that the total number of deaths between 1997 and 2002 increased by 57% and deaths of people aged 15 and above increased by 62%. The causes of death most frequently associated with AIDS (tuberculosis, influenza and pneumonia, intestinal infections, HIV, immune disorders) rose by 244% from 45,978 to 170,532 in 2002.

The Stats SA report confirms earlier findings by the Medical Research Council of many deaths due to HIV in South Africa.



HOW WE KNOW THAT ANTIRETROVIRALS SAVE LIVES

by Rishi Manchanda and Shilpa Sayana

The battle against HIV has been revolutionized by highly active antiretroviral therapy. Use of these medicines has resulted in less death, less progression to AIDS and fewer hospital admissions. The first antiretroviral, AZT, was introduced in 1987. Following AZT, other similar drugs were developed. These are known as NRTIs (Nucleoside Reverse Transcriptase Inhibitors). In 1996, the arrival of a new class of drugs, called protease inhibitors (PIs) marked the beginning of the Highly Active Antiretroviral Therapy (HAART) era. Soon afterwards, a third class of drugs called NNRTIs (Non-Nucleoside Reverse Transcriptase Inhibitors) was made available. Combinations of medicines from these three classes of drugs are now the “standard of care” for HIV. For example, the standard first-line treatment regimen in South Africa is lamivudine and d4T (both NRTIs) plus either nevirapine or efavirenz (NNRTIs).

Clinical trials are used to determine whether new drugs are both safe and effective. Carefully conducted clinical trials are the fastest and safest way to find treatments that work in people.

A brief timeline (see box) shows some of the major clinical trials that produced the evidence that antiretrovirals improve people's lives. Taken together, these clinical trials now mean that antiretrovirals are one of the best studied classes of medicines in history.

IMPORTANT ANTIRETROVIRAL CLINICAL TRIALS

1987: A trial showed that AZT resulted in major short-term improvements in clinical outcome and survival in patients with AIDS. At least 14 other well-designed trials helped to confirm this effect, although they found that the benefits of AZT decreased over time.

1995: Results from the ACTG 175 clinical trials showed that treatment with two NRTIs was much better than AZT alone. The trial showed that taking two drugs reduced death by 42% more than taking AZT alone. At least 14 other well-designed trials showed that two-drug (dual) therapy was better than just using one drug.

1997: A trial done in Canada, Australia, Europe and South Africa (CAESAR trial) showed that people taking lamivudine (3TC) plus AZT were much less likely to progress to AIDS than people taking AZT alone.

1997: The ACTG 320 trial showed that adding a PI to therapy with AZT and lamivudine helped delay disease progression and increased survival. The benefit of using three drugs (triple therapy) has been confirmed by at least twelve other well-designed clinical trials.

2002: Rachel Jordan and her colleagues reviewed 54 good quality clinical trials of antiretrovirals. They showed that people were less likely to progress to AIDS or death if they took three drugs instead of two. They also found that taking two drugs was better than taking one and they found that taking one drug was better than taking none. In other words they showed beyond any reasonable doubt that highly active antiretroviral therapy saves lives.

2006: A trial by the US National Institutes for Health found that people who take antiretroviral treatment continuously are half as likely to develop AIDS or die as people who take structured treatment breaks in their treatment. This finding on its own refutes the AIDS denialists. If antiretrovirals are bad for you, as the denialists claim, then why do people who take them continuously do better than people who only take them sometimes?



IMPORTANT ANTIRETROVIRAL RESULTS IN PRACTICE

In addition to clinical trials, many studies of HIV-positive people on antiretrovirals in operational settings (i.e. real-world, not controlled trials) prove that more patients are living longer, better, healthier lives on antiretrovirals. These are called cohort studies. They consist of tens of thousands of people from around the world including Europe, Africa, Israel, Haiti, Argentina, Hong Kong and the United States. Some of the more recent studies are listed below.

2003: The EuroSIDA study included more than 9,000 people in 70 centres including Europe, Argentina and Israel. It showed that AIDS or death decreased dramatically in people with HIV after the introduction of highly active antiretroviral treatment. As new treatments were introduced, the decrease in death and AIDS continued.

2004: A study from Hong Kong showed that people with advanced HIV had a decreased chance of death or AIDS after starting antiretrovirals. This was one of the first large observational studies from a non-western country

2005: A study of over 3,000 patients in Switzerland found that antiretroviral treatment, especially using three or more drugs, massively reduced progression to AIDS or death.

2006: The Danish HIV Cohort Study of 2,000 people showed that successfully suppressing HIV in the body with antiretrovirals in the first 6 to 18 months of treatment led to improved survival five years after starting treatment.

ANTIRETROVIRALS WORK IN THE DEVELOPING WORLD

by Nathan Geffen, Doron Isaacs and Paul Sonnenthal

Highly active antiretroviral treatment has been shown to work in clinics and hospitals in South Africa. Here are just a few examples:

- A Cape Town study of more than 1,000 patients found that less than 20% of people with AIDS illnesses survived two years if they did not take triple-drug antiretroviral treatment. For those who did take treatment, more than 70% survived.
- Three clinics in Khayelitsha treat nearly 2,000 adults and children with antiretrovirals. The average CD4 count when patients started treatment was below 100 (i.e. advanced AIDS). After three years, four out of five patients are still alive. Without ARVs, half would have died within a year. Almost all deaths were due to AIDS. In three years, only one in ten patients had to change their drugs due to side effects. Four deaths were due to drug toxicity.
- Lusikisiki has also reported promising results. The average CD4 count of 81 very sick people who started antiretroviral treatment was about 80. After six months 13 people died. All these deaths were due to HIV-related opportunistic infections and not due to side-effects. In fact there were very few serious side-effects: only one patient had to change his medicines due to side-effects. The weight of patients increased by eight kilograms and CD4 counts rose to over 260 on average.
- The Free State government has published data on its

antiretroviral programme. Their results have been promising. Most of the 1,162 patients were ill when they started treatment. After six months, 92% of them were still alive and being cared for in the system. Viral loads were analysed in about 190 patients. Over 150 had undetectable viral loads.

Other Developing Countries

Antiretroviral success has also been reported in other poor countries. For example:

- In a Medecins Sans Frontieres project in Cameroon, 60 patients, most with AIDS, were given antiretrovirals and followed for almost six months. On average, viral loads went down and CD4 counts rose by 83.
- A treatment project in Haiti, one of the world's poorest countries, released their results on 1 December 2005. More than 1,000 people, including 94 children were given antiretroviral treatment. Most had AIDS. After one year, only one child had died. Among adults, more than eight out of every ten were still alive. This is much better than would have occurred without treatment. The average CD4 count rose substantially, which would not have occurred without treatment. About 11% of adults and 5% of the children had side-effects that limited their treatment options.

Zambia's Treatment Success

Zambia's government has just announced results of its antiretroviral programme. Over 22,000 patients in the Lusaka area are on treatment.

For patients with CD4 counts below 50 at the time they started treatment, more than 90% are still alive after 15 months.

Before antiretrovirals became available a group of Zambian patients with CD4 counts below 50 was followed up. Within 15 months, all of them died.

TREATMENT SAVES CHILDREN'S LIVES

An HIV-positive baby who does not receive antiretroviral treatment is likely to die before his or her third birthday. However, if treated, a child has a good chance of living to adulthood. Many studies have demonstrated this.

A number of antiretrovirals have been shown to treat children successfully in clinical trials. Treatment has also been shown to work in real-world settings. Here are two examples:

- Medecins Sans Frontières (MSF) conducted a study of 1,840 children under the age of 13 receiving antiretroviral treatment in eleven programmes across Africa. After two years

more than nine out of every ten children were alive.

- Researchers examined a group of 159 children in Abidjan, Cote D'Ivoire before and after they began treatment. They compared how many opportunistic infections the children had before treatment to how many they had on treatment. They also looked at how often they

had diarrhoea, their CD4 counts and viral loads. On every score the children improved. Most of the children were alive after more than a year-and-a-half. Given their initial CD4 counts, most would have died without treatment. The researchers concluded that children did as well in this African project as children in developed countries.



Johanna Ncala, Vuyiseka Dubula and baby Naledi Ncala reading Equal Treatment. Naledi is an example of how antiretrovirals help prevent mother-to-child transmission of HIV. Naledi is HIV-negative whereas her mother, Johanna is HIV-positive. But many children born to HIV-positive mothers are also HIV-positive. They eventually need antiretroviral treatment to live.

NEW TREATMENT OPTIONS

by Simon Collins

New antiretrovirals usually have advantages over existing drugs. This could mean that they are more active against HIV, or that they work against a resistant virus. It could also mean that they are more convenient to take – needing fewer pills or fewer doses each day, or that they have fewer side effects.

New medicines in the pipeline

Two new medicines are very important for South Africa this year.

Tenofovir is a single pill, taken once-daily and is a “nuke” – a bit like AZT or d4T – but which is less likely to cause some of the side effects linked to those drugs, such as fat loss, anaemia, neuropathy, raised cholesterol or lactic acidosis. Tenofovir was approved in the United States in October 2001.

Atazanavir is a once-daily protease inhibitor that is taken with an additional dose of ritonavir to boost drug levels. The dose is two capsules of atazanavir plus one capsule of ritonavir, taken once daily. Unlike lopinavir/ritonavir (Kaletra), the protease inhibitor that is currently used as a basis for second-line treatment, atazanavir does not increase levels of fat in the blood. Atazanavir was approved in the US in June 2003.

New formulations

New formulations of existing medicines will also change



Thembisa Khwethala of TAC Lusikisiki. Her viral load is undetectable due to the effectiveness of antiretroviral treatment.

treatment options in the next year or two.

In development in the US – but not yet approved – is a formulation that includes three antiretrovirals in one pill, that only needs to be taken once daily. This is a combination of tenofovir plus FTC (similar medicine to lamivudine) plus efavirenz.

If manufacturers are able to produce this new combined pill, it is likely to be widely used because of its convenience. The side effects from this once-a-day pill are not expected to be any different from using its individual drugs separately.

When will tenofovir become available?

Tenofovir is awaiting registration from the Medicines Control Council. It should therefore be available soon in South Africa. It is a better medicine than d4T (stavudine) and should replace it in the standard first-line antiretroviral regimen used in the public health system.

Once tenofovir is available, TAC will also need to campaign for an affordable once-a-day pill in developing countries.

WHEN SHOULD WE START ANTIRETROVIRAL TREATMENT?

by Robin Wood

The purpose of antiretroviral treatment is to reduce death and illness in people with HIV. For the national antiretroviral rollout, it is important to know the best time to start treating people in the public health system. It is unnecessary for most people with HIV to start treatment for many years after they have become infected. But we also should not recommend starting treatment so late that many people die before accessing it.

Currently the national guidelines say that treatment should be started when a person has an AIDS-defining illness or a CD4 count less than 200.

We have a large number of patients and have analysed their progress. It has wrongly been assumed that HIV-related deaths occur mainly after people have developed AIDS. But AIDS occurs

If we want to maximise the benefits of antiretroviral treatment, an effort must be made to treat patients before they get AIDS illnesses.

This means encouraging people to get tested and regularly monitor their CD4 counts.

long after HIV infection and data from our patients shows that far too many die of HIV-related diseases before they have been diagnosed with AIDS.

We also find that when patients do develop AIDS, their death rates are very high (5 to 6% per month) if they do not start antiretroviral treatment.

Furthermore, many of our patients die while they are still waiting to go onto antiretroviral treatment just after their AIDS diagnosis.

Once on treatment, most of our patients do very well. But we have examined our data and found that of our patients who died, more than 60% did so before getting onto treatment. The implication of this is that we are starting treatment too late and the antiretroviral guidelines need to be revised.

The point at which we recommend that people start treatment should be *before* they get an AIDS-defining illness. Using the CD4 count also has its problems because patients without symptoms of AIDS often do not know their CD4 counts.

If we want to maximise the benefits of antiretroviral treatment, an effort must be made to encourage access to treatment before patients get AIDS illnesses. This can only be achieved if access to CD4 counts is increased and people with HIV are encouraged to have CD4 counts regularly. CD4 counts should be made available at all places where people with HIV use the public health system. A CD4 count should be offered when people get tested for HIV. It should also be offered at sexually transmitted infection and antenatal clinics.



REDUCING MOTHER-TO-CHILD TRANSMISSION TO ZERO

by Polly Clayden

Mother-to-child transmission (MTCT) of HIV has been virtually eliminated in developed countries. This is due to anti-retroviral medicines.

The reduction of mother-to-child transmission was an early benefit of antiretrovirals. PACTG 076 is the name of a trial completed in 1994. This was the first study to show that the antiretroviral drug AZT could protect the baby from infection. HIV-positive mothers took AZT before and during labour, and the baby received AZT for six weeks after birth. This reduced the risk of the baby becoming HIV positive from 25% to 8%.

After these results this strategy was recommended for all HIV-positive pregnant women in several developed countries. Since then, even further advances have been made, particularly since combination therapy of three or more drugs became more common in the late 1990s. Transmission rates with combination therapy are now *less than one percent*, practically down to zero.

What about poor countries?

However, for the majority of women living with HIV and their babies, resources are not yet available to provide these interventions.

A study completed in 1999 showed that using an antiretroviral could reduce MTCT by an equivalent amount to the PACTG 076 trial, but with a much simpler strategy at a much lower cost.

The HIVNET 012 trial in Uganda showed that a single dose of nevirapine given to an HIV-positive mother at the onset of labour followed by a single dose to her baby could reduce transmission by almost half. Similar results were shown in a South African trial called SAINT.

The effectiveness of a single dose of nevirapine in reducing MTCT has also been shown in a study in Thailand. The addition of single dose nevirapine to AZT given from 28 weeks of pregnancy further reduced MTCT from six percent (with AZT alone) to two percent. Single dose nevirapine is now recommended for MTCT in many developing countries. It has provided an essential starting point from which to build MTCT programmes, train healthcare workers and begin to access to antiretroviral treatment.

However more than half the women who take single dose nevirapine will develop resistance to NNRTIs (the antiretroviral drug class that includes nevirapine and efavirenz). This means these drugs are unlikely to work for them when they start treatment. Furthermore we can do a lot better than single-dose nevirapine (whose efficacy varies greatly, between 8% to 22% in real life settings).

In order to optimise the benefits



Naledi Ncala is HIV-negative. Her HIV-positive mother, Johanna Ncala, took triple-drug antiretroviral treatment during her pregnancy. Naledi took AZT for six weeks after birth.

of MTCT reduction we must move on to more effective strategies as rapidly as possible.

What is to be done?

- Treating a mother appropriately has shown the best MTCT reduction to date. So, for women who need treatment for their own health, there must be a fast expansion of access to antiretrovirals.
- More effective regimens for reducing MTCT should be provided for women who do not yet require antiretroviral treatment for their own health, such as short-course triple therapy or AZT from 28 weeks with single dose nevirapine.
- Strategies have been developed to protect women from nevirapine resistance. These should be implemented.

HOW WE KNOW THAT CONDOMS WORK

edited by Gregg Gonsalves and Poly Clayden based on a fact sheet of the Sexuality Information and Education Council of the United States

Latex condoms stop semen from entering the vagina during vaginal sex. They also stop semen from entering the rectum during anal sex. If secretions or bleeding occur in the receptive partner's vagina or rectum during sex, the condom protects the active partner's genital skin from these secretions or blood. Therefore condoms, if properly used every time, can prevent people from passing infections to their sexual partner. They are also very good at preventing pregnancy.

Here are some examples of studies which have shown how effective condoms are at preventing HIV infection:

A study published in *The New England Journal of Medicine* observed heterosexual couples, where one was HIV-positive and the other was HIV-negative, for an average of 20 months. (These couples are referred to as sero-discordant.)

Findings included:

- No HIV infection occurred among the HIV-negative partners of the 124 couples who used latex condoms correctly every time they had vaginal or anal intercourse.
- Ten percent of the HIV-negative partners (12 out of 121) of couples became infected when they used condoms occasionally for vaginal or anal intercourse.
- Fifteen percent of HIV-negative partners became infected when condoms were not used.

A study published in *The Journal of Acquired Immune Deficiency Syndromes* observed sero-discordant heterosexual couples and found the following:

- Less than 2% who consistently and correctly used condoms became HIV infected.
- Nearly 15% who used condoms inconsistently became HIV infected.
- Ten percent of people who never used condoms became HIV infected.

Several studies have shown that condoms protect against a number of sexually transmitted infections besides HIV, including chlamydia, gonorrhea and trichomoniasis.

The male and female condom, if properly used, can prevent people from passing infections to their sexual partners. They are also very good at preventing pregnancy.



Photo: Trygve Eng Kidland

TREATING OPPORTUNISTIC INFECTIONS SAVES LIVES

by Bob Huff

Our body's immune system usually protects us from opportunistic infections (OIs). But as HIV damages the immune system over time, the body's natural protection is reduced. When the immune system is weak, different kinds of disease-causing germs can take the opportunity to grow without being stopped by the immune system. This is called an infection.

When AIDS first appeared 25 years ago, many people with HIV rapidly died from OIs because their doctors did not know how to treat and prevent these diseases in people with damaged immune systems.

As doctors learned how to prevent OIs with medication and how to recognize and treat these infections more effectively, people with AIDS began to live longer and longer.

Clinical trials for Opportunistic Infection Medicines

Just as with antiretrovirals, medicines for treating OIs have been tested in clinical trials. This is how we know they work. For example:

- Fluconazole is a medicine used to treat severe oral thrush infections (also known as oropharyngeal candidiasis). Thrush causes painful little white sores in the mouth. A trial compared fluconazole to the previously used treatment for this disease, which affects many people with HIV. The cure rate for fluconazole was almost twice that of the previously used medicine.

- Acyclovir is a medicine that has been used to treat herpes, which are painful blisters on the lips or genitals, since the early 1980s. A number of clinical trials conducted then showed that acyclovir was effective. For example, a trial in 1981 on 24 people who had herpes and poor immune systems found that patients who used acyclovir got better much quicker.
- Cotrimoxazole is an antibiotic that is given to people with HIV whose CD4 count is below 200. A number of clinical trials have shown that this medicine helps to prevent PCP (Pneumocystis Carinii Pneumonia), a severe lung infection that kills many people with HIV. A review in 2003 of three clinical trials conducted in Africa involving more than 1,400 people found that cotrimoxazole reduced death by over 30%.

When the immune system is weak, different kinds of disease-causing germs can take the opportunity to grow without being stopped by the immune system. As with antiretrovirals, opportunistic infection medicines like acyclovir, cotrimoxazole and fluconazole have been tested and shown to improve quality of life.



EAT WELL, EXERCISE, DEWORM, LIVE HEALTHILY

by Polly Clayden

There is clear scientific evidence that good nutrition, exercise, not smoking and other aspects of “healthy living” can contribute to the good health of us all, HIV-positive or negative. Few would refute the benefits of a healthy diet, but to date there is no evidence that fruit, vegetables or olive oil have anti-retroviral properties or cure AIDS.

However scientific studies have shown that some aspects of “healthy living” can offer particular benefit to people with HIV.

Deworming

In many South African communities the prevalence of worms is high, particularly among children. In poor areas where people live in shacks and sanitation is bad, nearly all the children have worms. Even in one suburb, where people are poor but live in houses, more than 74% of 14-year-olds had worms, according to a survey conducted in 1999.

Besides the immediate health risks of worms, such as stunted growth in children and increased risk of many diseases including cholera and typhoid, our immune systems are weakened by worms if we have HIV or TB.



Nutrition

For most people, even once infected with HIV, there is a long phase where we remain healthy. This can be prolonged by correct nutrition and dietary supplements until it is time to need antiretrovirals.

Research has shown that HIV-positive people, who do not get adequate nutritional support and who consequently lose more of their body weight, die earlier than those who lose less weight.

A recent study from India, where people received nutritional support, found significant increases in body weight and body mass index in HIV-positive people, compared to people who did not receive this support.

A study in Tanzania found that a daily multivitamin supplement (consisting of vitamins B, C and E, but not vitamin A) slows down progression from HIV to AIDS.

Exercise

There are two major types of exercise that can be good for people living with HIV: resistance and aerobic. Resistance exercise (weight training) adds density and bulk to the muscles in your body. This type of exercise is probably the most important for people with HIV because more muscle means better immune function.

Aerobic training involves exercise that increases your heart rate. These include walking, running, swimming or cycling. Aerobic activity has been found to slow CD4 count decline. It also decreases your risk for developing heart disease and helps with weight management. While aerobic training is not advised for people who are experiencing wasting or unintentional weight loss, these individuals can benefit greatly from resistance training.

OUR CONTRIBUTORS

The focus section of this issue of *Equal Treatment* was made possible because of the efforts of a lot of people. Here are our contributors.



Olive Shisana is the CEO of the Human Sciences Research Council, publisher of the sero-prevalence and behaviour study on HIV in South Africa.



Gregg Gonsalves is with Gay Men's Health Crisis in the United States and has worked on HIV treatment access for more than a decade.



Robin Wood is a principal investigator of the Desmond Tutu HIV Centre. He has published numerous peer-reviewed papers on HIV.



Rishi Manchanda and **Shilpa Sayana** are doctors in the United States with special interest in HIV.



Bob Huff is the editor of GMHC Treatment Issues, a magazine that provides technical information on HIV for people living with HIV.



Polly Clayden and **Simon Collins** work for HIV i-Base, a British HIV education organisation.



Paul Sonenthal, Doron Isaacs and **Trygve Eng Kielland** are volunteers for TAC and helped edit this issue.



Mark Cotton is a paediatrician specialising in HIV at Tygerberg Hospital in Cape Town.



John Gosling is a psychiatrist with a special interest in HIV.



Jonathan Shapiro is the cartoonist for Independent Newspapers, Sunday Times and Mail & Guardian. He kindly agreed to allow us to use his cartoons for this issue.

FURTHER READING

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A LIFE OF MANY STRUGGLES

Gordon Mthembu's story as told to Vathiswa Kamkam

Gordon Mthembu has seen many things in his 43 years and living with HIV/AIDS is just one more new challenge for him to take on board.

Gordon was born in Katlehong, Ekurhuleni District in Gauteng Province and he has spent most of life living and working in this area. He matriculated at Inkomazi High School in Komatipoort in 1981.

After leaving school he followed his elder brothers and became a gangster which upset his mother who warned her boys that they would die because of their wrong doings. Gordon worried about his mother and realized that this was not the way he wanted to live his life. He

distanced himself from gangster life. It was not easy for him but he was determined to change his life for the better.

In February 1984 he joined the struggle for the recognition of Student Representative Councils in schools. In January 1985, he was sentenced to 15 years imprisonment for public violence. On appeal his sentence was reduced to four years. He was released in 1989.

In 1998, his fiancé passed away. Gordon also became sick and

decided to go for an HIV test. The result came back positive. However, he did not accept his status and went to different hospitals to do the same test.

In 2000 Gordon was elected as the chairperson of the Patients' Rights Charter. He was also the secretary of the Health Committee at Ncala Section in Katlehong. He met members of TAC at Natalspruit Hospital and became an active member during that same year.

In 2004 Gordon started antiretroviral treatment with support from his family. His 14-year-old daughter is his treatment supporter. His three children, one boy (21 years) and two girls (14 years and 16 months) are all HIV-negative. In his street, he is called "Mr AIDS" and that motivates him to talk openly about his status and to help others to be open about their HIV status.

"My goal is to deal with HIV/AIDS head-on!" says Gordon. His message to people is: "Have passion for whatever you are doing in the absence of monetary issues." He says people must not be loyal to any particular party or organization. They should rather be loyal to their principles and beliefs.

"In so doing we can protect the national democratic revolution," he says. "HIV/AIDS is a motivational factor not just a disease."



Gordon Mthembu and his daughter Owami. Owami is HIV-negative after she went through the mother-to-child transmission programme (see page 23 for her story).

KUTFOLA INGCULAZA USEMCANE

nguSibongile Mashele

Thandeka Magagula utshele Sibongile Mashele ngendlela atitfoli ngayo ukutsi unengculaza.

Ligama lami nginguThandeka Magagula, ngeneminyaka lemashumi lamabili. Ngihlala eBuffelspruit eMpumalanga. Ngacala kutati ngesimo sami sengculaza ngo 2002. Ngeva kubuhlungu esinyeni ngaya emtfolampilo. Kwatsite uma ngifika bangihlola bangitshela kutsi nginesifo semacansi. Ngabese ngahlola kutsi ngikhulelwe yini. Ngatfoli kutsi vele ngikhulelwe. Kwaba buhlungu kimi loko, kutfolakala nesisu kanye nesifo semacansi.

Benginelisoka lebengivana nalo, bengineminyaka lengu17 ngaleso sikhatsi ngitsandza kuphotfoli tifundzo tamatikuletsheni. Bengihlala ePitoli ngiyofundzela umsebenti ekholishi. Ngahlangana nelisoka lelihle, lisebenta kahle, kantsi linemoto yakanokusho ngavele ngahlanya. Satsandzana nalelijaha, besitsi uma siya emacansini sisebentise lijazi lemkhwenyana. Kwatsi ngalelinye lilanga ngibuya ekhaya kumaholide, ngatfoli kutsi lapha sihlala khona kune liphunga lalomunye umfati. Ngambuta, watsi bekunebangani bakhe netintfombi tabo.

Kwatsi lawomalanga wangikhipha sayodla lidina wangitshela kutsi uyangitsandza, ufuna ukungishada, bengijabulile kakhulu ngalelolanga. Kwatsi sesilungisela kuyolala watsi yena sewudziniwe kusebentisa lijazi lemkhwenyana futsi sesitoshada, nami ngavuma. Saya emacansini



Stifombe: Sibongile Mashele.

Thandeka Magagula wase-Buffelspruit eMpumalanga uphila nengculaza.

ngaphandle kwelijazi lemkhwenyana.

Ngaloko kusa wavuka wahamba waya emsebentini, akaphindzanga wabuya, kwakukugcina kwami kumbona ngaloko kusa. Kwatsi sekundlule emalanga lamane ngacala ke ngeva sinye sami sibuhlungu. Kulaphoke ngacabanga ukuya emtfolampilo. Kwatsi emuva kwemalanga ngitfoli kutsi ngikhulelwe ngahlolela ingculaza, ngatfoli kutsi ikhona engatini yami. Kwaba buhlungu kimi kutsi emuva kwekutsi ngitfolakale ngikhulelwe

kanye nesifo semacansi, nginegculaza.

Ngatfoli maphahla emantfombatana. Ngatfoli i-nevirapine kutsi ngikhone kuvikela bantfwana bami. Ngempela bavikeleka bantfwana abazange bayitfoli ingculaza.

Loko kwangifundzisa kutsi kuya emacansi sikhatsi singakafiki, ugcina utfoli tifo temacansi, kukhulelwa uphindze umoshakalelwe likusasa lakho.

MY RIGHT TO HAVE A CHILD

Gugu Dubazana (25) is HIV-positive and the single mother of a two-year old daughter Lungile. They live in Orange Farm, Johannesburg. She told her story to Skhumbule Hambani.

Lungile's father and I were an item since high school. We were inseparable. He was loving, caring and supportive, but the problems started when I was pregnant and after Lungile was born, we separated.

I found out about my status during the first month of my pregnancy. At first I didn't have the courage to tell him. I attended the antenatal clinic and through the support I received I disclosed to him at two months of pregnancy. His reaction was mixed. First he cried, thinking of the baby's future, then he

"Your life depends on you. You can make it on your own, HIV-positive or not. Don't deprive yourself of the right to have a child.

Know your status, know your CD4 count and access treatment."



Photo: Jacob Segale.

Gugu Dubazana is living positively with HIV.

laughed knowing that he's not alone and then he said, "I'm sorry".

I became stronger by the day and was very happy that I would be bringing someone into this world. At six months I had shingles, I was scared of passing them to my unborn baby and at the clinic they told me not to worry because the baby was fine. I was given acyclovir to apply. I received a lot of information about HIV/AIDS while attending the antenatal classes.

From what I had learned about the science of HIV and how to treat it, I knew to demand nevirapine syrup for the baby just after birth. Ten days later, blood samples were taken from her. She tested HIV-positive. She also had oral thrush that was treated with nystatin.

I was worried, but the postnatal support group told me that my baby's positive results could be

because she had not yet produced her own antibodies. She would have to be retested at 18 months.

I was under a lot of stress while I waited for those 18 months to pass. I feared that if she tested positive she would have to take life-long antiretroviral treatment. I lost weight and was hyper-pigmented worrying that my baby might have to take treatment everyday.

Finally the day arrived. The results came back negative. I was over the moon with joy. I also checked my CD4 count and discovered that it was up from 500 to 606.

My message to everyone: "Your life depends on you. You can make it on your own, HIV-positive or not. Don't deprive yourself of the right to have a child. Know your status, know your CD4 count and access antiretroviral treatment."

MOTHER HIV-POSITIVE DAUGHTER HIV-NEGATIVE

by Phindile Madonsela

I am Phindile Madonsela, 34-years old and HIV-positive. I am a mother of three: Sthembiso (16), Sifiso (12) and Owami (1). I was born in Mofolo, Soweto. I was a blood donor from 1992 until 1997 when the blood clinic gave me a letter stating that they are no longer going to take my blood and recommended that I go and see a doctor.

I took the letter and went to the clinic, as I did not have money to go to a private doctor. The doctor suggested that I do an HIV test and I agreed. I was told to come back after two weeks.

When I went to collect my results, I was told that my results were missing and I must do another test. Before that I heard someone saying that if they told you that your results were missing, you must know that you had tested HIV positive. I refused to do the second test and went home feeling stressed.

When she was six days old, a PCR test was done to check if she was HIV-positive or not. She tested HIV-negative and that was good news to me.



Photo: Phindile's friend.

Phindile Madonsela and her baby girl Owami. A PCR test proved that Owami was HIV-negative at six months.

A year later I decided to go back to the same clinic for another HIV test. The results came back positive. In 2003 I became pregnant so I enrolled in the prevention of mother-to-child transmission programme. I gave birth to a baby girl, "Owami." When she was six days old, a PCR test was done to check if she was HIV-positive or not. She tested HIV-negative and that was good news to me. Before I fell pregnant, my CD4 count was 815 but after the pregnancy it has dropped to 380. I am not on antiretrovirals yet. I live a

positive life by eating healthily and exercise by running four times a week.

The first time I disclosed was on a community radio programme in 2001. It was not easy but I did it for my own sake. In 2002, I joined TAC and have become a treatment literacy practitioner and run a support group called Sinenhlanhla. I am also the deputy chairperson for TAC in the Gauteng Province. I have learned a lot about the treatment of HIV and other health-related issues.

WAR AND DISEASE IN THE CONGO

The war in the Democratic Republic of Congo (DRC) is the worst since World War II. It started in 1998 and has caused millions of deaths since then. As with many wars, most deaths are from disease because of the breakdown of the health system.

The war is mostly the responsibility of those who have waged it. This includes the militias in the DRC as well as the countries that sent troops to fight in the DRC such as Zimbabwe, Uganda and Rwanda. Yet the international community and the African Union have done very little to help the people of the DRC. Although peace accords have been signed, fighting still continues.

A report was recently published in the prestigious medical magazine, *The Lancet*. Researchers visited 19,000 households in the DRC between April and July 2004. Based

on this survey, they found that an additional 38,000 people die a month in the DRC due to war. The authors estimate that between 1998 and 2004, nearly 4 million people died due to war. The vast majority died from preventable diseases such as measles because the war has made access to basic health-care almost impossible. In areas where fighting occurred, deaths were much higher than in peaceful areas. But only a small portion of deaths were as a result of actual fighting.

Activists have to speak out on the tragedy of the DRC. It does not get the attention it needs. For example,

the war in the DRC is much worse than the Iraqi war. Yet the United States has over 130,000 troops in Iraq. There are only 19,000 United Nations peace-keeping troops in the DRC, even though it has more than double Iraq's population. We must urge the international community and African Union to provide more peacekeeping troops and humanitarian medical aid to the DRC.

Source: *The Lancet* 2006, 367:44-51



FACTS ABOUT THE DRC

Population: 54 million (2003)

Capital city: Kinshasha

Life expectancy: 43 years

Deaths due to war, 1998-2004: 3.9 million

People living with HIV/AIDS: 1.1 million

Sources: *Human Development Report 2005, UNAIDS, The Lancet*

In the December 2005 issue we published an article by Jeff Hoover criticising PEPFAR.
The US embassy in Pretoria asked for the right to reply, which we present here.

US EMBASSY DEFENDS PEPFAR'S APPROACH

by Mark Schlachter, US embassy, Pretoria

The United States' President's Emergency Plan for AIDS Relief (Pepfar), has become an important partner to over 120 countries around the world in HIV/AIDS prevention, care and treatment efforts. Of all these countries, South Africa receives the largest amount of Emergency Plan resources – approximately R1,3 billion for 2006.

The Plan's rapid introduction of new resources has allowed the US to support dramatic improvements in service delivery in South Africa. Unfortunately this programme has also generated a number of misperceptions and suspicions regarding the Emergency Plan's goals and intentions. I hope to address some of these by restating here the programme's principles and objectives.

PEPFAR is a commitment of R90 billion over five years to support a rapid expansion of HIV/AIDS services around the world. The specific goals include supporting antiretroviral treatment for two million people, preventing seven million new infections, and providing care for 10 million people infected or affected by HIV/AIDS, including orphans and vulnerable children.

Considerable progress has been made toward those goals in the last two years. Over 400,000 people have received life-saving antiretrovirals with PEPFAR support, including more than 40,000 South Africans. In 2005 more than 100,000 South African orphans and vulnerable children received support through the Emergency Plan, and some 300,000 South

Africans received HIV and AIDS care services.

Clearly, we still have much to do and adjustments to make. National governments, PEPFAR partners and organizations such as TAC are playing a crucial role in helping lead the way. For example, when PEPFAR was launched, organizations such as TAC pointed out that the cost of branded antiretroviral drugs was too high for most of those in need.

In addition to approving generic medicines, the US recently launched a global effort to improve the supply chain for drugs, rapid test kits, and laboratory equipment. These logistical improvements will further reduce the cost of providing critical services. Does more need to happen? Absolutely, but the trends toward lower costs and increased access are encouraging.

Since its launch in 2003, PEPFAR has sometimes been criticized by those who believe the programme reflects an ideological or religious bias. In fact, nothing could be further from the truth.

Much of this criticism revolves around the requirement that one-third of PEPFAR funding supports abstinence education. The US believes that abstinence education is an essential, science-based

component of a balanced prevention campaign. Seeking to encourage youths to delay their sexual debuts is crucial to reducing rates of infection among youths and young adults.

Abstinence education is not sufficient by itself, however. Two-thirds of PEPFAR funds support "Be Faithful" activities, condom promotion and other prevention initiatives. The US is steadfastly behind a balanced ABC approach to HIV/AIDS prevention.

In 2006, the US expects to expand and improve its HIV/AIDS services. It supports sustainable programmes that promote equitable access to these services and that strengthen the capacity of the public health system. We support initiatives that target integrated TB/HIV care, expand access to counseling and testing and improve quality paediatric antiretroviral care.

We welcome the input and analysis of our activities by TAC and any other concerned organization. Only by working together and sharing our experiences, positive and negative, can we hope to tackle this pandemic.

For more information on PEPFAR in South Africa, including possible funding opportunities, please visit: <http://pepfar.pretoria.usembassy.gov/>

THE GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS AND MALARIA

by Bernard Rivers

The Global Fund is the brain child of UN Secretary General Kofi Annan.

In April 2001, he declared that there should be a "war chest" of \$7 billion to \$10 billion (approximately R64 billion) per year to finance the fight against AIDS, and proposed that much of this should be raised, and then distributed, by a "Global Fund."

Beyond everyone's wildest expectations, the Global Fund to Fight AIDS, Tuberculosis and Malaria opened its doors in January 2002, and over the following three years raised billions of dollars,

approved hundreds of grants, and enabled millions of people to benefit.

The Fund operates differently from traditional forms of foreign assistance.

It uses a model that emphasises control over grants by recipients and a more business-like approach. This means that the programmes to be funded are designed and run by the recipient countries, without the Fund telling them what they must do.

Grant approvals are based purely on feasibility and technical merit. Unlike the US President's Emergency Plan for AIDS Relief (PEPFAR), no consideration is given to ideological factors. With some grants, a lot of the money goes directly to grassroots NGOs. Overheads are kept to a minimum, with the whole operation being run by 150 staff members in Geneva.

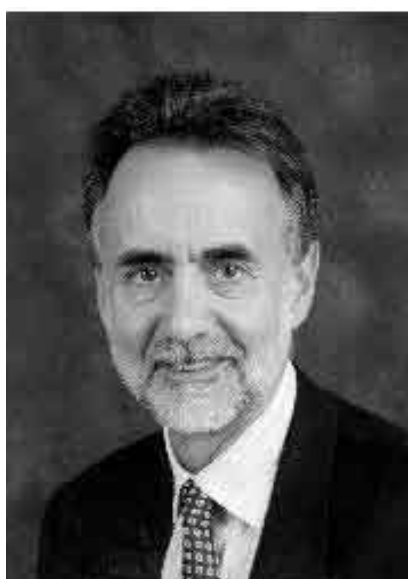
The grants are "results-based," meaning that if the results promised by recipients are not delivered, the grant may be terminated and the money sent elsewhere. The Global Fund's executive director, Richard Feacham, has summarised this approach in six words: "Raise it, Spend it, Prove it."

Once the start-up funding had been provided, the sequence in reality became "Spend it, Prove it, Raise it." The Fund must spend its start-up money efficiently. It must then prove that this expenditure

The Fund has achieved some remarkable results:

- It has approved 322 grants to 128 countries.
- Its financing has helped to provide 220,000 people with antiretroviral treatment for HIV.
- 600,000 patients with tuberculosis have received treatment under DOTS (Directly Observed Treatment, Short Course).
- More than 1.1 million people have been treated for malaria
- It has provided more than 3.1 million insecticide-treated mosquito nets.

Photo: <http://www.yes-dk.dk>



Richard Feacham, Executive Director of the Global Fund to Fight AIDS, Tuberculosis and Malaria.

has led to good results. It must also finally point to those results to persuade donors to give more.

By the end of its fifth year, the end of 2007, the Fund plans to scale up these achievements at least eight-fold.

However, in order to achieve this growth, the Fund must overcome a number of obstacles. "Proving it," that is, showing that prevention programmes are actually averting potential infections and that lives are being saved by grant programmes is very difficult. It is just too early in the life of the grants to know. Proof cannot come for another year or two.

Unfortunately, donor governments are becoming reluctant to increase their contributions without proof that current grants are achieving their planned results. This has led to a shortage of funds. This means that for now, there is no money to fund existing grants for the next two years.

The Fund was intended from the beginning to be innovative, and innovators always face unanticipated challenges. What separates successful from unsuccessful innovators is how quickly they recognise problems, candidly discuss them, and then find ways to overcome these challenges.

With strong and creative leadership from its board, the Fund can propose creative, but workable solutions and it might have a chance to get back to the scale of operations that Kofi Annan originally envisaged. If not, the future of the Fund looks bleak.

Bernard Rivers runs Aidspan, an independent NGO that serves as a watchdog of the Global Fund and is editor of Aidspan's Global Fund Observer newsletter.



South Africa and the Global Fund

(by Equal Treatment Staff)

Every country deals with the Global Fund through what is called a Country Co-ordinating Mechanism (CCM). The CCM receives, develops and submits proposals for funding to the Global Fund. The South African National AIDS Council (SANAC) is South Africa's CCM. It was established in 2002, but has not worked well.

It is dysfunctional as the following examples show:

- It has few meetings and often meetings are cancelled at the last moment.
- Its lack of co-ordination and poor management have resulted in lost opportunities for funding from the Global Fund.
- The Minister of Health and the previous SANAC president, Jacob Zuma, failed to spend most of the R30 million used to establish SANAC in 2002. As of February 2005, only R520 000 of this money had been used. A large portion of this money was spent on unoccupied offices.
- The Auditor-General has issued two qualified audits of SANAC. This means that SANAC's finances are not properly managed.

OUR RIGHTS IN OUR COURTS

Threat to Judicial Independence

Two new bills before Parliament (called the 14th Constitutional Amendment Bill and the Superior Courts Bill) propose a number of changes to the justice system in South Africa which have been strongly criticised for undermining

the independence of judges and courts, and the separation of powers between the executive, legislature and judiciary.

The proposed changes in the package of laws include reducing the involvement of the Chief Justice in the appointment of senior acting judges, reducing the role of the Judicial Services Commission in appointing Judges President (the

judges who head courts) and relocating authority over court administration from the judges to the Minister of Justice.

The Bill was published in mid-December for comment by mid-January, a time when most people were on holiday. It is now important for civil society to participate in the debate about the bill and make submissions to Parliament.

Amphotericin B shortage resolved

A shortage of amphotericin B has been resolved. This essential medicine is used to treat cryptococcal meningitis, an AIDS-defining illness with a high death rate.

The drug became affordable in the public sector in 2005 due to pressure from the AIDS Law Project, TAC, the Desmond Tutu HIV Centre and the SA HIV Clinicians Society on the distributor Bristol-Myers Squibb (BMS). In January 2006, concerned doctors at GF Jooste Hospital informed TAC that they had run out of stock. A number of patients who needed this medicine could not get it.

BMS apologised for the "inconvenience to ... customers". TAC and others wrote to BMS demanding they urgently supply this life-saving medicine and take steps to stop further shortages.

BMS restored supply of the medicine in mid-February.

Delayed victory for gay marriage

The Constitutional Court has ruled that gay couples are to have the right to marry. Section 30 (1) of the Marriage Act was ruled unconstitutional because it limits marriage to heterosexual couples. The Court said that denying gay couples the right to marry not only disadvantaged them legally, but also contributed to prejudice.

Judge Albie Sachs handed down the judgment on 29 November 2005, but it does not change the law immediately. Instead it has given Parliament one year to correct the law to recognise gay marriage equally to heterosexual marriage.

The judgment was unanimous. However, in respect of the remedy, Judge Kate O'Regan stated that gay couples should not have to wait another year.

The Court also recognised the right of religious organisations to continue to refuse to celebrate same-sex marriages.

Justice at last in Lorna Mlofana case

In December 2003 TAC Khayelitsha member Lorna Mlofana was murdered after she disclosed her HIV status to her attackers. After more than two years, justice has been achieved. Her killer, Ncedile Ntumbukane, was sentenced to life in prison. He was also given ten years for rape. His co-accused, Vuyelwa Dlova, was sentenced to ten years in prison for assault, three of which were suspended.

In South Africa rape and sexual violence against women and girls are significant drivers of the HIV epidemic. Violence against women is a daily attack on the dignity and equality of women, and our social values.

TAC has a firm commitment to promoting gender equality, to ending domestic and sexual violence and to mobilizing men and women for gender justice.

HIV/AIDS IN SOUTH AFRICA

by S.S. Abdoel Karim and
Q. Abdoel Karim

This book covers all aspects of HIV/AIDS from basic science to medicine, sociology, economics and politics. Its emphasis is on the epidemic in South Africa.

The text offers accessible information for the general reader, students, healthcare providers, researchers and policy makers in the field.



KHABZELA

THE LIFE AND TIMES OF A SOUTH AFRICAN

by Liz McGregor

This book describes the difficulties faced by Fana “Khabzela” Khaba during his time as a taxi driver and radio DJ at YFM. He died of AIDS in 2003.

Liz McGregor interviews Khabzela’s friends and family to show his thoughts and feelings during this time. She tells of the unfortunate decisions he made in choosing how to treat HIV.

It also shows how charlatans offering fake cures for AIDS exploited Khabzela.

Watch SABC 1 on Sundays at 13h30
and on Mondays at 08h00.



The TV programme for everyone living with HIV
and AIDS, our partners, families, and friends.



Beat It! Schedule

- 5 March: Disabilities
- 12 March: HIV and media
- 19 March: Handling death and loss
- 26 March: VCT vs routine testing
- 2 April: Vaccines and prophylaxis
- 9 April: Nutritional supplements

MICROBICIDES: MORE CHOICE FOR WOMEN?

Condoms are an essential part of HIV prevention. The only way to prevent transmission of HIV during vaginal or anal sex is to use a condom or femidom. Most people do not find condoms comfortable. But more importantly, women often are not able to negotiate using a condom with their partners. Hopefully, microbicides will one day give us more options.

Photo: NIH



Examples of different types of microbicides that are being tested. The types above are a cream, suppository, gel and film.

Microbicides are products that prevent sexual transmission of HIV and other sexually transmitted infections (STI) when applied to the vagina or anus. Microbicides can be produced in many forms, including gels, creams, suppositories, films, or as a sponge or ring that releases the active ingredient over time.

Microbicides are currently unavailable, but scientists are researching about 60 products and at least 18 are in clinical trials. Some could become available in five to seven years.

Many people, especially women often find that they cannot use

condoms during sex. This is usually because they do not have enough power in their sexual relationship to make their partner wear a condom. Microbicides will not erase the oppression of women, but microbicides will empower women to protect themselves because they do not need their partners' co-operation. This is important because we know that biologically, women are far more vulnerable than men to get infected with HIV during sex.

Pharmaceutical companies invest very little into microbicide development because they do not foresee profit in them. Therefore most of the support for microbicide

development comes from governments and donors. Like other new health technologies it is critical that microbicides reach people in the developing world that need them.

HIV and STIs attack the body in many ways. Effective microbicides will fight infection by stopping this attack at one or more stages in the process.

Types of microbicides

We can divide microbicides into four different types:

Type 1: These are a physical barrier that prevent HIV and other STIs from infecting human cells. Example brands: Carraguard, Cyanoviran, cellulose sulphate, PRO 2000.

Type 2: These improve the vagina's natural defence by keeping it acidic. This kills infections. Example brands: Acidform, BufferGel, Lactobacillus crispatus.

Type 3: These kill or disable viruses by stripping them of their outer covering. Example brands: C31G and octoxynol-9.

Type 4: These prevent HIV from replicating after they've entered the body. Example: tenofovir (an antiretroviral).

Clinical Trial Phases:

See the July 2005 issue of *Equal Treatment* for a detailed explanation of how clinical trials work.

- Phase I trials test if a product is safe.
- Phase II trials test for the correct safe dosage of a product.
- Phase III trials are the final stage before a product is registered. They test if a product is effective.

Microbicide Clinical Trials

- More than 60 products or compounds are under development.
- Eighteen of these products are currently in clinical trials.
- Six products have entered phase III trials, the final stage of testing.
- Three are in phase II trials and will be entering phase III in the near future.
- Another nine are still being tested for safety (phase I trial).

Microbicide testing in South Africa

A number of microbicides are being tested in South Africa.

In two sites in Kwazulu-Natal there will soon be a trial to compare two potential microbicides: PRO2000 and tenofovir gel.

Currently, a study evaluating a product called Carrugard is being conducted in South Africa

jointly by the Infectious Disease Epidemiology Unit at the University of Cape Town's School of Public Health in collaboration with the Population Council. This includes a phase III study among 6,000 women at three sites in South Africa. This is one of the first Phase III microbicide trials.

How useful will Microbicides be?

According to the Rockefeller Foundation Microbicides Initiative, if a microbicide is used in half the sexual encounters of just 20% of people who can be reached through existing services then:

- A microbicide that is 60% effective against both HIV and STIs could prevent 2,5 million HIV infections over three years.
- 27% of infections could be prevented in sub-Saharan Africa.

Sources: *Global Campaign for Microbicides*, *Rockefeller Foundation Microbicides Initiative*, *World Health Organisation*, www.infoforhealth.org



Global Campaign
FOR Microbicides

The *Microbicides 2006 Conference* will be held in Cape Town from 23 to 26 April.

TAC will hold a satellite conference on 22 April.



Photo: Vuyokazi Majali

If microbicides become available, women will have more options to protect themselves from HIV infection. However, at the moment microbicides are experimental and unavailable.

AFRICAN TREATMENT ACTIVISTS COME TOGETHER IN JOHANNESBURG

by Nomfundo Dubula, TAC international treatment literacy co-ordinator



Photo: Nomfundo Dubula

Delegates take part in a group activity at the African Treatment Literacy conference.

From 11 to 14 December 2005, TAC conducted an Africa-wide treatment literacy workshop and strategizing meeting with representatives from 14 countries. The meeting took place at the Devonshire Hotel in Johannesburg. The participating countries included Botswana, Zimbabwe, Zambia, Malawi, Mozambique, Lesotho, Namibia, Swaziland, Nigeria, Tanzania, Kenya, Ghana, Uganda and Cameroon.

Participants were asked to present an assessment of the state of the epidemic and other health crises in each of their countries. In choosing

who to attend, we gave priority to people living with HIV/AIDS and ensured that there was appropriate gender balance among participants.

The other main priority was given to community-based organizations, including many from the religious sector. We were excited to have members from the religious community because of the critical need to address HIV stigma in churches.

WORKSHOP OBJECTIVES

The aim of the conference was to share ideas and skills about

treatment literacy with people engaged in community work around pressing health issues and HIV/AIDS throughout Africa.

In the first two days, TAC presented selections of its own treatment literacy training. Delegates also shared ideas and experiences about useful methodologies on community-based mobilization and education around health.

We intend to continue conducting joint treatment literacy initiatives with our partner organisations in Africa.

TAC appeal for funding



In South Africa we have over 5 million people living with HIV.
500,000 people will die if they don't get antiretroviral treatment soon.
TAC campaigns for access to treatment, a people's health service
and community driven prevention strategies.

SUPPORT US TO SAVE LIVES

**DONATE
NOW**

Donate at your nearest bank OR www.tac.org.za/donatenow



**treat
200 000
by 2006**

TREATMENT ACTION CAMPAIGN
NEDBANK, BRAAMFONTEIN BRANCH
ACCOUNT NO: 128 405 1870
BRANCH CODE: 195 005

Visit www.tac.org.za for more information on how you can help or volunteer at TAC.

LETTERS FROM OUR READERS

WINNING LETTER: VAGINAL INFECTIONS AND MOUTH ULCERS

This month's winning letter writer receives a R200 Exclusive Books courtesy of TAC.

I am HIV-positive, but I have opportunistic infections. I have vaginal infections and mouth ulcers. Could you please provide me with the information to help me. I think I have cancer of the cervix. What symptoms must I look for?

From Nono (name changed)

TAC RESPONDS:

The Herpes virus causes vaginal infection such as thrush and ulcers of the vagina and mouth. The symptoms are a cream- or whitish-coloured discharge, itching and blisters. These can be treated with acyclovir. Your nearest clinic should

have this medicine. In order to be sure whether it is cervical cancer or not, you need to go to a clinic and have a pap-smear.

Herpes infections usually recur but they are treatable. The treatment takes about two weeks. After that the infection should clear. If not, go back to the clinic.

LIFE INSURANCE

I would like to know why HIV-positive people are not allowed to have life insurance. It is declined when they apply. When you are HIV that does not mean you are going to die now?

From Qavi (name changed)

TAC RESPONDS:

It is true that many insurance companies refuse to give life insurance to people with HIV. But

some do. People with HIV must insist that more companies begin providing life insurance policies.

Two examples of companies that offer insurance are AllLife and Altrisk. We contacted them to get a quotation for a person with HIV.

One of the companies explained to us that because of antiretroviral treatment, people with HIV can now live longer lives and should therefore also be able to access life cover.

However, they also explained that cover for people with HIV is about four to eight times more expensive than if the same person did not have HIV.

AllLife said that as they begin to understand better the long-term effectiveness of treatment, they will adjust their prices.

They also link their cover to proper monitoring and adherence to antiretroviral treatment.



Write a letter

The writer of the best published letter will receive a R200 Pick 'n Pay gift voucher.

Keep your letters short and to the point. Indicate if you wish to have your name changed. Remember to include your contact details.

Write, fax or email to:
Equal Treatment
34 Main Road
Muizenberg, 7945
South Africa
Fax: 021 788 3726
Email: et@tac.org.za

OOPS! WE WERE WRONG!

Errors in the December issue of *Equal Treatment*

- The quote attributed to Sister Du Preez on page 12 contains an error. The following quote should not have appeared: *"It is also necessary to end political party conflicts which often lead to failure of community involvement in the clinic."* This erroneously attributed statement was included as a result of a misunderstanding by the journalist who interviewed Du Preez. We apologise for the inconvenience caused to Sister Du Preez.
- The photo caption on page 22 is inaccurate. Pefar funds are not subject to the US government's Global Gag policy which prevents the funding of organisations promoting the interests of sex workers and/or the right to abortion. We apologise for this error. Please note that some other sources of US government funding are subject to the Global Gag.



EQUAL TREATMENT QUIZ

The first entry drawn from a box that answers 12 or more of the 15 questions below correctly will win a R200 Pick 'n Pay gift voucher. The winner of last issue's prize is *Phumzile Zondo* of Ntuzuma in KwaMashu, Kwazulu-Natal.

All the answers are in this month's *Equal Treatment*

1. What causes AIDS?
2. What does the HIV test look for to identify if someone is HIV positive?
3. The window period for the HIV antibody test can last up to three months. Is it possible during this time to infect someone with HIV?
4. Why is an HIV antibody test not accurate for some babies under 18 months?
5. What percentage of South African women are HIV-positive according to the latest antenatal survey?
6. How many South Africans are estimated to be living with HIV?
7. Give two examples of clinics where highly active antiretroviral therapy is making a difference to people living with AIDS.
8. Name one new antiretroviral medicine that will hopefully be registered in South Africa this year.
9. Dr Robin Wood has written an article about when is the best time to start antiretroviral therapy. What test does he recommend that people with HIV take regularly?
10. Give two studies that show why condoms work.
11. What medicine treats severe oral thrush?
12. What medicine helps prevent PCP (pneumonia)?
13. What cells does HIV attack to weaken the body?
14. Can fruit and vegetables fight HIV the way that antiretrovirals do?
15. Give three examples of healthy living for people with HIV.

How to enter

Send your answers, numbered 1 to 15, by post, email or fax. You must include your correct name and postal address. This competition is not open to TAC employees or current recipients of treatment literacy bursaries. Closing date for sending entries is 31 March 2006.

Post: *Equal Treatment*, 34 Main Road Muizenberg, 7945

Email: et@tac.org.za Fax: 021 788 3726 Please phone 021 788 3507 to confirm receipt.



Participants in a treatment literacy awareness-raising workshop in the Western Cape.



Curious children wanting to know what the training is about.

Photos: Vuyokazi Majali

I AM HIV

By Hlumela Ngakwa

Most of you don't know much
about me, but those who do,
don't want to see me anymore.
I am HIV the cause of AIDS.

I have a place to stay in a human
body, I sometimes stay in a hotel
called Vaginal Fluid or
in a motel called Semen.

I am HIV, everybody lives with me
until proven otherwise
Yebo! I am HIV the cause of AIDS.

I was born in a human body
during years of unsafe sex.
I infect the rich or the poor,
The black and white or any race

Male or female, they know me
very well.
I am HIV the cause of AIDS.

I attack hundreds of people every
second in the world Whatever I say
please do listen, or I'll take you one
by one and decorate my luxurious
home - the grave.

ACCEPTANCE

By Lerato Maloka

Many obstacles change
our lives

For better, for worse,
for future

But how we tackle them gives us
courage, experience, motivation

Our attitude
determines our altitude

Life is a journey
enjoy it

Take care of yourself
so that others can take care of you

Don't let what others do to you make you
change yourself, hate yourself and doubt yourself

But learn to accept who you are
Acceptance conquers all.



TAC members hand out TAC materials in Orange Farm, Gauteng.

Photo: James Dlamini

Unpack the facts around HIV and AIDS

HIV and AIDS is a key challenge to our country. The one big solution we have against it is education. Get educated about this condition and other health and development challenges facing us as a society.

The Soul City Institute for Health and Development Communication has a range of these materials on many topics. These include the very popular Education Pack, containing a video, posters, comics and other HIV and AIDS related education material. We also provide a training pack on Violence Against Women. Other materials are on issues like, Starting Your Own Business, Taking Action to stop TB, High Blood Pressure, Depression and many more. There are materials for parenting as well as those for Grade 7 learners.

Contact us for these and other materials via fax: **(011) 622 7169** or call **0860 11 5000**, write to **Soul City Action Pack Offer, PO Box 28510, Kensington, 2101**. Or visit our website at **www.soulcity.org.za**



**SOUL
CITY**
INSTITUTE
HEALTH & DEVELOPMENT
COMMUNICATION



ZACKIE ACHMAT CAPE TOWN

**“I have been on
antiretrovirals
since 2003. I am
healthy again
because
of them.”**



**treat
200 000
by 2006**

