

Introducing AZT

‘A world of antiretroviral experience’

Anthony Brink

The evil that is in the world always comes of ignorance, and good intentions may do as much harm as malevolence, if they lack understanding. On the whole, men are more good than bad; that, however, isn't the real point, but they are more or less ignorant, and it is this that we call vice or virtue; the most incorrigible vice being that of an ignorance that fancies it knows everything.

The Plague
Albert Camus

Helping keep HIV disease at bay
in children.

- ⊗ Generally well tolerated.¹
- ⊗ Improved cognitive function.¹
- ⊗ Survival rates similar to adults.¹
- ⊗ Improvement in growth and well being.²

RETROVIR[®]
zidovudine

A world of antiretroviral experience.

AZT advertisement in *Lancet* in 1991: ‘Helping keep HIV disease at bay in children • Generally well tolerated • Improved cognitive function • Survival rates similar to adults • Improvements in growth and well being RETROVIR A world of antiretroviral experience’



Phial of 25 mg AZT supplied by Sigma-Aldrich Chemie GmbH for use in research laboratories, with the label bearing an orange stripe imprinted with a skull and crossbones icon to signify potentially fatal toxic chemical hazard to the handler – spelt out in six languages: ‘Toxic Giftig Toxique Toxico Tossico Vergiftig’ – and the warning: ‘TOXIC Toxic to inhalation, in contact with skin and if swallowed. Target organ(s): Blood Bone marrow. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wear suitable protective clothing.’ (The latest version of the label also carries a cancer warning.)

‘You may be looking at a fifteen-year-old label which appeared in a satirical magazine recently.’ **Judge Edwin Cameron, Supreme Court of Appeal, SAfm, 18 July 2000**



100 mg capsule of AZT supplied by GlaxoSmithKline for medicinal ingestion. The package insert recommends: 'A broad range of dosages (between 500mg and 1500 mg/day) [*between 20 and 60 times the quantity in the Sigma phial*] have been used.'

'RETROVIR (ZIDOVUDINE) MAY BE ASSOCIATED WITH HEMATOLOGIC TOXICITY INCLUDING GRANULOCYTOPENIA AND SEVERE ANEMIA [*massive destruction of white (immune) and red blood cells respectively*]. ... ANTIRETROVIRAL NUCLEOSIDE ANALOGUES, INCLUDING RETROVIR ... ARE POTENTIALLY FATAL.'
GlaxoSmithKline: AZT 'Product Information'

'... for AIDS patients, it is urgently necessary to develop a remedy substituting this toxic substance, AZT.' Hayakawa et al. ***Biochemical and Biophysical Research Communications* 176:87-93 (1991)**

'Clinical manifestations of ANA [*antiretroviral nucleoside analogues, such as AZT*] toxicity: It is self-evident that ANAs, like all drugs, have side-effects. However, the prevalent and at times serious ANA mitochondrial toxic side-effects are particularly broad ranging with respect to their tissue target and mechanisms of toxicity: Haematological; Myopathy; Cardiotoxicity; Hepatic toxicity; Peripheral neuropathy.' Lewis and Dalakas, ***Nature Medicine* 5:417-22 (1995)**

'The antiretroviral drugs currently licensed in the United Kingdom are zidovudine (azidothymidine), zalcitabine (ddC) and didanosine (ddI). ... All are very toxic. Suppression of bone marrow elements can occur with any of the three, as can peripheral neuropathy.' ***Adverse Drug Reaction Bulletin, No.178 (1996)***

'I don't see why people who are well should take a drug [AZT] which pretty reliably will make them sick.' **Professor Robin Weiss, *Positively Healthy News*, January 1989**

'...there are severe limitations to antiretroviral therapy, including toxic side effects (lipid deposition, increased risk of diabetes and cardiac infarcts, muscular and neurological toxicity). Therefore, it is imperative to launch clinical trials to test additional treatments that are less toxic.' **Gallo and Montagnier, *Science* 298(5599):1730-1 (2002)**

'AZT underwent clinical trials and was introduced as a specific anti-HIV drug many years before there were any data proving that the cells of patients are able to triphosphorylate the parent compound to a level considered sufficient for its putative pharmacological action. Notwithstanding, from the evidence published since 1991 it has become apparent that no such phosphorylation takes place and thus AZT cannot possess an anti-HIV effect. However, the scientific literature does elucidate ... a number of biochemical mechanisms which predicate the likelihood of widespread, serious toxicity from use of this drug. ... Based on all these data it is difficult if not impossible to explain why AZT

was introduced and still remains the most widely recommended and used anti-HIV drug. [The continued administration of AZT] either alone or in combination ... to HIV seropositive or AIDS patients warrants urgent revision.' **Papadopulos-Eleopoulos et al. *Current Medical Research and Opinion* 15, Supplement 1: 'A Critical Analysis Of The Pharmacology Of AZT And Its Use In AIDS' (1999)**

'[AZT-class drugs] are much more toxic than we considered previously. ... The layer of fat-storing cells directly beneath the skin, which wastes away ... is loaded with mitochondria ... other common side effects of [AZT and similar drugs are] nerve and muscle damage, pancreatitis and decreased production of blood cells ... all resemble conditions caused by inherited mitochondrial diseases.' **Brinkman et al. *Lancet* 354(9184):1112-5 (1999)**

'[There is] no new evidence in the medical literature in the last year on the adverse effects of AZT.' **Salim Abdool Karim, director of HIV Prevention and Vaccine Research, Medical Research Council, Deputy Vice Chancellor University of Natal, Professor in Clinical Public Health, Columbia University, USA, and chairman of the Scientific Programme Committee of the 13th International AIDS Conference in Durban 2000, *Sunday Independent*, 14 November 1999**

'Abdool-Karim dismissed the government's objection on the use of the drug [AZT] as a "pathetic excuse" [saying] that about 40,000 children could be saved each year if the South African government reversed its opposition to using the anti-AIDS drug ... to reduce mother-to-child infection.' ***AIDS Weekly*, 29 November 1999**

'I've read nothing in the scientific or medical literature indicating that AZT should not be given to people.' **Professor William Makgoba, then president of the Medical Research Council, now Vice-Chancellor of the University of Natal, *Nature*, November 1999**

'The drug [AZT] being out there is justified.' **Dr Helen Rees, then president of the Medicines Control Council, 9 November 1999**

'For the past decade in San Francisco we have witnessed the destruction of human life caused by AIDS drugs. We hoped that by exhibiting at the conference, we could warn participants to prevent a similar catastrophe occurring in their countries.' **ACT-UP San Francisco, letter to President Mbeki, after being barred from attending the 13th International AIDS Conference in Durban, read in Parliament by then Deputy President Zuma, 20 April 2000**

'Well, I think the dilemma here is we've got to learn from what has happened here in the last 18 years and try not to repeat it, as we move into Africa ... I can't overstate, I think, how severe the problems are with the current therapies. ... People are dying from the effects of the therapies themselves in some cases. ... People are suffering from severe life-threatening complications of drugs. And a lot of them get to the point where they simply can't use them anymore. So as we talk about bringing therapy to Africa, even if we can solve the problem and cost and infrastructure and delivery, I have this pang in my heart of are we doing the right thing, you know, with these drugs? Or are we unleashing another kind of epidemic over there of drug side effects as well?' **Martin Delaney, director of the San Francisco-based pro-antiretroviral drug lobby, Project Inform, on Ted Koppel's ABC television show *Nightline*, 6 June 2001**

'These drugs have side effects, but those side effects are not nearly as bad as the package insert leads us to believe they could be.' **Charlene Smith, pro-AZT campaigner on her website, speakout.org.za (accessed mid-1999)**

'... the toxicity of these drugs [AZT and similar] is very low indeed.' **Professor Robin Wood, co-director of the Desmond Tutu HIV Centre at the University of Cape Town, *Health-e News*, 13 May 2005**

'Concerned to respond appropriately to [AIDS], many in our country have called on the government to make the drug AZT available in our public health system. ... There ... exists a large volume of scientific literature alleging that, among other things, the toxicity of this drug is such that it is in fact a danger to health. These are matters of great concern to the government as it would be irresponsible for us not to heed the dire warnings which medical researchers have been making. I have therefore asked the Minister of Health, as a matter of urgency, to go into all these matters so that, to the extent that is possible, we ourselves, including our country's medical authorities, are certain of where the truth lies.' **President Thabo Mbeki, Parliament, 28 October 1999**

'The President has been gravely misinformed about the safety aspects of AZT. ... The review ordered by President Mbeki of the anti-AIDS drug is neither necessary nor justified ... there is no new data that will raise legitimate concerns about AZT's safety. ... GlaxoWellcome are a reputable company. We do not lie to people.' **Peter Moore, medical director of GlaxoWellcome SA (now GlaxoSmithKline), 30 October to 12 December 1999**

'GlaxoWellcome have to be devious to take the position they do now in promoting [AZT], simply because of the weight of evidence against the use of their product.' **Martin Welz, editor and publisher, *noseweek* investigative journal, in the e.tv documentary *The Truth on AZT*, 12 December 1999**

'[AZT is] perfectly acceptable. ... It causes slight side effects ... but ... so do many medicines. ... Worries about AZT's safety surfaced in the early 1990s but have long faded.' **Joseph Perriens, director of the Care and Support division of the UN AIDS programme in Geneva, Associated Press report, 3 November 1999**

'AZT is a drug that was developed for use in chemotherapy for cancer patients. It was, however, never used in cancer patients because it was regarded as too toxic to use. Tests have clearly shown that rats that were exposed to high levels of AZT for prolonged periods of time, developed vaginal cancer. This is a very serious finding. Other toxicological data exists with respect to AZT, including damage to nerves, muscles and bone marrow. All of this data needs to be assessed very thoroughly. As the Minister of Health I have a responsibility for ensuring that South Africans get appropriate and affordable healthcare. This responsibility extends to ensuring that no healthcare intervention has a long-term negative effect on people.' **Dr Manto Tshabalala-Msimang, National Minister of Health, Parliament, 16 November 1999**

'We're making a laughing stock of ourselves. Government is discrediting the drug because it doesn't want to pay for it. But it's backfiring, because there is no evidence ... they will find nothing.' **Dr Ruben Sher, head of HIVCare International (a project of the Netcare private hospital group), *Financial Mail*, 9 November 1999**

'AZT is being singled out because government is trying to defend its decision not to provide it for mother-to-child transmission. It's pathetic; the MCC is toadying to the President. There's no medical or scientific reason whatsoever for the MCC to review the material. I'm sure the MCC will come out with a balanced report, but it's nauseating that they're even looking at it. ... In Uganda, they're winning the war against the epidemic because they had the political will to do so, not by believing in conspiracy theories.'

Professor Gary Maartens, head of the HIV/AIDS Unit, Groote Schuur Hospital, Cape Town, *Financial Mail*, 9 November 1999

'I've had a patient coming off AZT in trials because of all the publicity. It's irresponsible, the statements being made. We are losing a lot of the ground we've gained. It means government still doesn't want to take responsibility for the epidemic.'

Dr Ashraf Grimwood, principal medical officer for Cape Town and chairman of the National AIDS Convention of SA (Nacosa), *Financial Mail*, 9 November 1999

'... published studies have shown that patients on combination therapy with AZT and 3TC have been able to maintain or improve their quality of life.'

Dr Desmond Martins, president of the Southern African HIV Clinicians' Society, *Financial Mail*, 9 November 1999

'To combat a fatal disease, it is perfectly acceptable to use drugs slightly more toxic than an aspirin. ... AZT is a valuable therapeutic drug.'

Joseph Perriens, *New York Times*, 25 November 1999

'[President Mbeki's stated concern about the dangerous toxicity of AZT and other ARVs is] just a red herring to distract attention from the existence of effective treatments. ... The government is dragging its feet because it cannot see its way around the cost issues. ... With 1,500 new cases every day, the cost of providing an anti-retroviral drugs regimen on that scale is enormous. ... This is a very Thatcherite government.'

Zackie Achmat, founder and director of the Treatment Action Campaign (TAC), *Wired*, 22 April 2000

'The most remarkable thing after I started taking the medicines actually is that in the first three weeks, I became so depressed – I'd never been as depressed in my life.'

Zackie Achmat in *Newsweek*, 24 November 2003

'Today, anti-HIV medication has resulted in a more subtle dementia ... At first, patients forget phone numbers and their movements slow. Some worsen until they can't hold a job or perform other activities, but not everyone worsens – and doctors can't predict who will. ... many specialists worry [that] nearly all of them may suffer at least some brain symptoms ... memory loss and other symptoms of so-called neuroAIDS, which afflicts at least one in five people with HIV and is becoming more common as patients live longer.'

Associated Press report, 15 October 2006

[Achmat's] words were bats that flew into each other in the dark. His sentences ended in mid-air. It was as if he looked at you through a dense layer of fog. It was during these times that I wondered what was happening to him. Especially when he cancelled press conferences and public appearances at the eleventh hour. ... he talks about his past and the complex interaction between the chemicals in his brain, his genes and the virus with which he was diagnosed in 1990 ... Chances are good this can lead to depression and cognitive reduction and, during the final stages, even to dementia – a condition that

usually only afflicts the elderly. ... Losing control of his mind is his biggest fear ... “As long as I hold on to my dignity.” ... And then came the physical side effects of the antiretrovirals. Especially peripheral neuropathy – a condition that takes place when the nerve endings are impaired; burning pains are felt in the feet and legs. It was so bad for Achmat, that by the fifth month of antiretroviral treatment he could no longer walk. “I was totally melancholic and dysfunctional at the beginning of the year. I fought with my nearest and dearest, and I did not want to accept that I was experiencing side-effects.”
News24.com, 1 December 2004

‘Things have changed in Zackie Achmat’s life. Once readily accessible and always quick with a sound bite, a personal assistant now monitors the cellphone and diary of the chairperson of the Treatment Action Campaign (TAC) and screens visitors before ushering them into Achmat’s study. ... As much as these changes signify a new level of structure in Achmat’s life and the need to manage multiple requests for interviews, the more profound changes emerge from his first six months of anti-retroviral therapy and how this has forced the charismatic activist to review his life. ... a frightening setback ... occurred in February and March ... which shook Achmat’s self-confidence. ... “Going into my fifth month I started feeling a sensation in my feet. At first I dismissed it, thinking I’d done something at the gym. The second week it was clear to me and I thought, ‘I can’t let Manto win and I can’t let Mbeki win’, and I kept quiet for three more weeks.” When Achmat finally told his doctor about his symptoms, the nerves in his feet were so sensitive that he could barely walk. A change of drugs (from d4T to AZT [in fact an equally toxic nucleoside analogue drug]) has arrested the situation and his left foot feels better, but he still can’t put any weight on his right foot for any length of time, nor can he walk long distances. ... Achmat, who has a clinical history of depression, says that the fact that he was immobile for a week while his doctor tried to bring the side effects under control brought on a terrible depression, the worst he’s had in two years.’ **Daily Dispatch, 28 May 2004**

‘[The neurotoxicity of Achmat’s ARV treatment caused him] grade 2 peripheral neuropathy [i.e. *nerve damage in his limbs*] ... being treated ... with ... neurological pain adjuncts [*as well as CNS (central nervous system) injury (i.e. cytotoxic brain damage)*] manifesting in sensory, motor and proprioceptive [*disturbances (i.e. impaired ability to feel, see, hear, taste, smell and balance; to control his limbs properly; and to sense his limb positions and movements)*].’ **Dr Steven Andrews, affidavit in Cape High Court, Case No. 12156/05**

‘Antiretroviral nucleoside analogs used in highly active antiretroviral therapy (HAART) are associated with cardiovascular and other tissue toxicity associated with mitochondrial DNA depletion. ... AZT is a potent inhibitor of thymidine phosphorylation in heart mitochondria.’ **McKee et al. Cardiovascular Toxicology 4(2):155-67 (2005)**

‘We are very concerned about a number of toxicities associated with the long-term use of anti-retroviral drugs. ... We are seeing an increasing number of patients with dangerously high levels of cholesterol and triglycerides. ... The bad news is that we now must find ways to deal with unanticipated toxicities, including the potential for premature coronary disease.’ **Anthony Fauci, director of the National Institute for Allergies and Infectious Diseases, US NIH, press release, 5 February 2001**

'Thirty-five of thirty-seven [child] subjects [treated with d4T, a nucleoside analogue drug similar to AZT] experienced serious clinical adverse events, including infection (33 subjects), lymphadenopathy [damage to lymph nodes] (19 subjects), hepatosplenomegaly [abnormal swelling of liver and spleen] (15 subjects), chills and fever (12 subjects), and development of an AIDS-defining condition (4 subjects). ...Clinical adverse events of lesser severity that were reported by more than 20% of subjects included rhinitis [inflamed nasal passages] (76%), cough (70%), diarrhea (68%), rash (62%), nausea and vomiting (51%), abdominal pain (43%), anorexia [appetite suppression] (41%), respiratory disorder (38%), headache (35%), pharyngitis [inflammation of throat] (32%), pruritis [general itching] (30%), pain (22%), peripheral neurologic symptoms [loss of sensation and/or pain in hands and feet] (22%), and nervousness (22%).' **Kline et al. *Pediatrics* 96:247-252 (1995)**



Xolani Nkosi

Xolani Nkosi: 'I'm taking AZT. I'm taking the cocktail. The bitter one I don't like is AZT. There're other pills. I don't really know the names.' Q: 'Do you ever not take the pills and not tell anyone? XN: 'I used to do that but my mom [Gail Johnson] caught me.' **Xolani Nkosi, interviewed by Christine Maggiore in July 2000 for the documentary film *AIDS in Africa*; died 1 June 2001**

'There is no question in the minds of scientists that the government contributes to a climate that raises the possibility that ... antiretrovirals are toxic.' **Hoosen 'Jerry' Coovadia, Head of the Department of Paediatrics and Professor of HIV-AIDS Research, Nelson R Mandela Medical School, University of Natal, and chairman of the 13th International AIDS Conference in Durban in 2000**

'... there is scant medical evidence to support Mbeki's opposition to AZT'. **Mark Schoofs, Pulitzer Prize winner for 'AIDS: The Agony of Africa' in *Village Voice*, 22 December 1999**

'Four years of "hit hard, hit early" HIV treatment may be on the way out in the US, as evidence mounts of the drugs' serious side effects. AIDS experts in the US are about to complete a humiliating U-turn when the Department of Health and Human Services launches its revised HIV treatment guidelines in January.' ***New Scientist*, 16 December 2000**



James Hayman, before and after a month's daily course of 600 mg AZT and 300 mg 3TC

'I think the medicine is killing me.' **James Hayman to his law-firm partner; died 8 June 1998**

'Any doctor, any scientist, medical scientist who has dispensed AZT to an AIDS patient or HIV-positive patient since the Concorde trials [*reported in Lancet in April 1994*] has been a party to murder.' **Martin Welz in *The Truth on AZT***

'Before 1986, when zidovudine (formerly called azidothymidine) was introduced, the number of patients with HIV-associated myopathy [*wasting*] was small, and myopathy was considered a rare complication of HIV infection.' **Dalakas et al. *New England Journal of Medicine* 322(16):1098-105 (1990)**

'A clinically significant myopathy that precedes the development of zidovudine associated mitochondrial myopathy has been a rarity in our experience.' **Coker et al. *AIDS* 5(2):229-31 (1991)**

'... wasting syndrome [occurs] almost exclusively [among AZT-treated patients].' **Poznansky et al. *British Medical Journal* 311:156-158 (1995)**

'... Mbeki took an interest in Aids dissident Anthony Brink's manuscript "Debating AZT". ... Mbeki read the manuscript soon after he became president ... Brink claimed that the drug AZT, rather than HIV, caused people to "waste away".' **Kerry Cullinan, editor of *Health-e News*, 'Infected by Toxic Ideas', *Financial Mail*, 7 May 2004**

'... as evidence accrues that AZT (zidovudine, *Retrovir*) is associated with lipoatrophy [*wasting*], the guidelines move away from firmly recommending an AZT-containing regimen as part of a nucleoside backbone.' **British HIV Association (BHIVA) draft revised treatment guidelines, 26 April 2005**

'Antiretrovirals [AZT, 3TC, d4T, ddI], not features of the host or the immune response to HIV, are overwhelmingly responsible for the development of lipoatrophy, according to studies presented on Monday at the Seventh International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV, in Dublin, Ireland. ... Professor William Powderley of University College Dublin, a co-chair of the Workshop, said: "Large numbers of people are being exposed to an avoidable toxicity. The presentations at this meeting show the overwhelming influence of drug choice on the development of lipoatrophy.'" (Hammond et al. *Antiviral Therapy* 10:L4, 2005; Parker et al. *Antiviral Therapy* 10:L5, 2005) **Keith Alcorn, AIDSmap News, 15 November 2005**

'It was often difficult [*in AZT clinical trials*] to distinguish adverse events possibly associated with administration of Retrovir [AZT] from underlying signs of HIV disease or intercurrent illnesses [i.e. *AZT can cause AIDS-defining illnesses*].' **Physician's Desk Reference, Mosby-Year Book Inc., 1996**

'... it is often difficult to differentiate between the manifestations of HIV infection and the manifestations of zidovudine. In addition, very little placebo controlled data is available to assess this difference.' **USP DI: Drug Information for the Health Care Professional, 16th edition (United States Pharmacopeial Convention, 1996)**

'The side effects of AZT can be indistinguishable from the symptoms of AIDS.' **Professor Anthony Pinching, London consultant immunologist, and early AZT clinical trials overseer, speaking at the 12th International AIDS Conference in Geneva in 1998**

'Patients should be informed that the major toxicities of RETROVIR are neutropenia and/or anemia.' **GlaxoSmithKline, AZT 'Prescribing Information'**

'... neutropenia [means a] decrease in the number of neutrophils in the blood. ... It results in an increased susceptibility to infections. ... [A] neutrophil [is] a variety of granulocyte (a type of white blood cell) ... capable of ingesting and killing bacteria and provides an important defence against infection.' **Oxford Concise Medical Dictionary**

'AZT induces significant toxic effects in humans exposed to therapeutic doses. ... Cytogenetic observations on H9-AZT cells showed an increase in chromosomal aberrations and nuclear fragmentation when compared with unexposed H9 cells. ... The toxicities explored here suggest that the mechanisms of AZT induced cytotoxicity in bone marrow of the patients chronically exposed to the drug in vivo may involve both chromosomal and mitochondrial DNA damage.' **Agarwal and Olivero, Mutation Research 390(3):223-231 (1997)**

'[Due to their] potent immunosuppressive properties ... profound immunosuppression ... often accompanies therapy with nucleoside analog drugs. ... they have a number of associated toxicities, some of what may be severe. Of particular concern is immunosuppression which is uniform with standard treatment programs. Each of the nucleoside analogs is associated with a profound lymphocytopenia [*depletion of immune cells*], with a reversal of the CD4/CD8, and opportunistic infections.' **Cheeson, Keating and Plunkett, Nucleoside Analogs in Cancer Therapy (New York: Marcel Dekker Inc., 1997)**

'The drug [AZT] can inhibit the production of red blood cells and may reduce white blood cell counts to the point where the drug has to be discontinued to avoid infections.' **FDA press release, 5 March 1990**

'What it does, it suppresses the immune system. The very system we want to boost. ... I wouldn't take AZT, I would not.' **Dr Tshabalala-Msimang, *The Truth on AZT***

'In your letter to me of June 19, you make the extraordinary statement that AZT boosts the immune system. Not even the manufacturer of this drug makes this profoundly unscientific claim. The reality is the precise opposite of what you say, this being that AZT is immuno-suppressive. Contrary to the claims you make in promotion of AZT, all responsible medical authorities repeatedly issue serious warnings about the toxicity of antiretroviral drugs, which include AZT.' **President Mbeki, letter to DA leader Tony Leon, 1 July 2000**

'It can only be Thabo Mbeki's belief that antiretrovirals like AZT are toxic and destroy the immune system. There is no other explanation for the paranoia that's going on.' **Zackie Achmat, *Saturday Star*, 12 January 2002**

'The estimated probability of developing [*Non-Hodgkin*] lymphoma [*cancerous tumours in lymph nodes*] by 30 months of [AZT] therapy was 28.6% and by 36 months, 46.4%.' **Pluda et al. *Annals of Internal Medicine* 113(4):276-282 (1990)**

'Blood transfusion is often necessary in patients with AIDS, especially in those receiving AZT, a drug which produces severe anaemia in a proportion of recipients. Forty nine (36%) of 138 patients treated with AZT required blood transfusion at least once.' **Costello, *Journal of Clinical Pathology* 41:711-715 (1988)**

'Anaemia [during AZT therapy] appears to be due to bone marrow suppression.' **Dainiak et al. *British Journal of Haematology* 69:299-304 (1988)**

'Four patients with the acquired immunodeficiency syndrome ... developed severe pancytopenia [*destruction of red and white blood cells and clotting platelets*] 12 to 17 weeks after the initiation of azidothymidine (AZT) therapy. Partial bone marrow recovery was documented within 4 to 5 weeks [*after discontinuation of AZT*] in three patients, but no marrow recovery has yet occurred in one patient during the more than 6 months since AZT treatment was discontinued.' **Parkash et al. *Annals of Internal Medicine* 107:502-505 (1987)**

'It is worrying that bone marrow changes in patients on zidovudine seem not to be readily reversed when the drug is withdrawn. These findings have serious implications for the use of zidovudine in HIV positive but symptom-free individuals.' **Mir and Costello, *Lancet* 2(8621):1195-6 (1988)**

'AZT appears to be a moderately-strong transplacental carcinogen.' **Olivero et al. *Journal of the Acquired Immunodeficiency Syndrome* 14(4):A29 (1997)**

'The fact is that some of the mice have contracted cancer. It attacks bone marrow. It is very toxic.' **Dr Tshabalala-Msimang in 'Truth and Lies about AZT', *Mail&Guardian*, 1 December 1999**

'Stop giving AZT to the damn mice and start giving it to people.' **Charlene Smith in 'Truth and Lies about AZT'**

'What we are trying to do is to put on the table information so that [if] the citizens of the country ... get hold of AZT they do so knowingly, so that tomorrow nobody should say we were not told.' **Dr Tshabalala-Msimang in *The Truth on AZT***

'It's become clear over time that the health minister [*Dr Tshabalala-Msimang*] is not fit to be in her position. How can the government be negotiating over an anti-retroviral treatment plan when it is being advised by the very man [*Dr Roberto Giraldo, then president of the Group for the Reappraisal of the HIV-AIDS Hypothesis*] who believes that the drugs are poisonous and cause AIDS?' **Jonathan Berger, AIDS Law Project attorney and researcher, and TAC member, 9 March 2002**

'If anyone was in doubt that this country's leader remains an Aids dissident, they should read last week's ... essay [in] ANC Today [by] President Thabo Mbeki ... *A hundred flowers under the African sun* ... This is classic denialist twaddle – the president ... still thinks anti-retrovirals are poison. We were not surprised when the Minister of Health Manto Tshabalala-Msimang parroted the self-same conspiracy theory a few days later ... These two are, after all, our liabilities in the battle against Aids.' **Mail&Guardian editorial, 8 August 2003**

'AZT FOR PREGNANT WOMEN' 'President Mbeki, AZT/Nevirapine for pregnant women with HIV' **TAC street demonstration placards**



AZT tablets dispensed to HIV-positive pregnant women attending Mowbray maternity clinic in Cape Town

The packet containing the 300 mg tablets prescribes two a day on an empty stomach. This daily dose of 600 mg of AZT exceeds the 500 mg dose that Lenderking et al. reported in the *New England Journal of Medicine* 1994 Mar 17;330(11):738-43 to cause such 'severe side effects' among 'asymptomatic patients' that it was 'life threatening in some cases'.

The packet instructs mothers taking AZT not to nourish their babies naturally by breastfeeding them. This is to prevent babies from being harmed by exposure to traces of toxic AZT in breast milk. But denying babies their mothers' milk and giving them artificially manufactured formula milk instead creates a massively increased risk of serious disease and retards their mental and physical growth and development.

Mothers are told to 'Complete the prescribed course of this medicine' – in other words keep taking the drug even if it makes them sick.

No information about the dangerous toxicity of AZT for mothers and its harmful and sometimes fatal effects on unborn and newly born babies is provided on or in the packet to enable mothers to make an informed choice about whether to expose themselves and their babies to the risk of being poisoned by the drug.

'The concentrations of the drug [AZT] in the liquor and in the fetal blood [of 6 aborted human foetuses] were higher or equalled those found in the maternal blood. ... The drug remains contra-indicated in pregnancy.' Gillet et al. *Journal of Gynecology, Obstetrics, and Biological Reproduction* 19(2):177-180 (1990)

'In reviewing the frequency of birth defects in this population [of HIV-positive women treated with AZT during their pregnancies] we noted eight birth defects (10%) out of 80 live births.' [In addition, eight women spontaneously aborted following AZT treatment, and eight abortions were 'therapeutically' induced.] Kumar et al. *Journal of the Acquired Immune Deficiency Syndrome* 7:1034 (1994)

'Prevalence of anomalies [birth defects] in the cohort [of '1932 liveborn deliveries from 1993 to 1996 to HIV-infected women in the state of New York (NYS)'] was compared with that of the general NYS population. ... Children of study women who were prescribed ZDV had increased adjusted odds of any anomaly ... 2.76 times greater than in the general population ... Children ... in this cohort had a greater prevalence of major anomalies than did the general NYS population.' Newschaffer et al. *Journal of the Acquired Immune Deficiency Syndrome* 24(3):249-56 (2000)

'Our findings support the hypothesis of a link between mitochondrial dysfunction [in babies] and the perinatal administration of prophylactic nucleoside analogues.' [Eight children were born with severely impaired energy metabolism and corresponding muscle and other cell damage, manifesting in heart muscle injury and muscle weakness generally. Five children, of whom two died, presented with delayed neurological symptoms – extensive brain damage in the form of massive cortical necrosis, cortical blindness, epilepsy and spastic quadriplegia, and three were described as 'symptom-free' but had 'severe biological or neurological abnormalities'. Four of the children had

been exposed in utero to AZT and 3TC combined, and four to AZT alone. None were HIV-positive.] **Blanche et al. *Lancet* 354(9184):1084-9 (1999)**

'An exhaustive study in a large prospective cohort [of AZT- and 3TC-exposed children found] unexplained symptoms compatible with mitochondrial dysfunction. A total of 2644 of 4392 children were exposed to antiretrovirals ... All the children with "established" or "possible" mitochondriopathy diagnosed in this study had been exposed to antiretroviral drugs ... in the pre, per- and post-partum periods. ... The finding that the use of antiretroviral nucleoside analogues in the perinatal period is associated with persistent mitochondrial disease is confirmed ... a risk about 30 times higher than that in the general population. ... Despite active screening, no similar cases were found in the antiretroviral unexposed group. ... by age 18 months ... a coherent syndrome is appearing with three main features: neurological symptoms (principally developmental retardation, seizures and behavioral disturbances), significant abnormalities on cerebral MRI (principally lesions of the white matter and brainstem) and often hyperlactataemia either persistent or transient outside the treatment period. First described as a myopathy associated with zidovudine, the issue of mitochondrial toxicity of nucleoside analogues is currently a growing problem. Its clinical expression is highly variable, from peripheral neuropathy to severe lactic acidosis.' **Barret et al. *AIDS* 17(12):1769-1785 (2003)**

'Mitochondrial dysfunction has been reported in HIV-negative children perinatally exposed to zidovudine, a drug often used in HIV-seropositive mothers during pregnancy. The purpose of this study was to determine the incidence of cerebral MR imaging findings in HIV-uninfected children exposed to zidovudine who present with unexplained neurologic symptoms. ... Images observed in children with antiretroviral-induced mitochondrial dysfunction are similar to those observed in congenital mitochondrial diseases.' **Tardieu et al. *American Journal of Neuroradiology* 26(4):695-701 (2005)**

'AZT exposure causes a persistent depletion of mtDNA [*mitochondrial DNA*] [in babies exposed to AZT in the womb. Because] chemically induced tumors take 20 to 30 years to develop ... the possibility ... exists that exposed children might have an elevated cancer risk that will be manifested later in life. ... the results presented here underscore the necessity for long-term follow-up of children of HIV-infected mothers receiving prenatal HAART therapy.' **Poirer et al. *Journal of the Acquired Immune Deficiency Syndrome* 33(2):175-183 (2003)**

'The probability of developing severe disease at 3 years of life was significantly higher in children born to mothers [administered AZT during their pregnancies] than in those born to [untreated] mothers. ... The same pattern was observed for severe immune suppression: the probability of developing severe immune suppression was significantly higher in children born to [AZT-treated] mothers ... than born to [untreated] mothers. ... Finally, survival probability was lower among children [born to AZT-treated mothers] ... compared with children born to [untreated] mothers.' **De Martino et al. *AIDS* 13(8):927-33 (1999)**

'Prenatal and perinatal [AZT] exposure were associated with 1.8-fold increased risk of progression to AIDS or death after adjusting simultaneously for all variables associated with disease progression ... Restricting the analysis to children born after April 1994 (date of public release of the results of ACTG 076), [AZT] exposure was associated with 2.5-fold increased risk of progression to AIDS or death after adjusting simultaneously for the same variables. ... Steady improvements in prognosis of [HIV] infected children

unexposed to [AZT] were observed in each successive birth cohort, but infected children exposed to [AZT] lagged behind these temporal changes. Our results are from a well-characterized and prospectively followed cohort of US HIV-infected children and are consistent with recent results from the Italian Registry for HIV Infection in Children [reported by de Martino, cited above].' **Kuhn et al. *Journal of Infectious Diseases* 182(1):104-11 (2000)**

'In this retrospective study, the risk of RPD [rapid progression of disease] was five to six times higher among infants born to [AZT] treated compared with untreated mothers. ... After adjusting for prematurity and maternal clinical characteristics, RPD was three times more likely to occur in infants born to [AZT] treated compared with findings in untreated mothers.' **De Souza et al. *AIDS* 24(2):154-61 (2000)**

'AZT-exposed [Macaca nemestrina monkey] infants took three times as many sessions (6) as controls (2) to meet criterion on Black-White Learning, a simple discrimination task [and performed] significantly [worse in locating] the reward. ... Postnatal weight increase was significantly lower in AZT-exposed infants ... Hemoglobin dropped significantly in the AZT-treated animals after treatment began and remained low until the end of the study ... The hematological toxicities reported here are consistent with those seen in 500 mg/day AZT-treated humans.' **Ha et al. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 7(2):154-7 (1994)**

'The AZT animals [Macaca nemestrina monkeys given AZT during pregnancy] developed an asymptomatic macrocytic anemia, but hematologic parameters returned to normal when AZT was discontinued. Total leukocyte count decreased during pregnancy and was further affected by AZT administration. AZT-exposed infants were mildly anemic at birth. AZT caused deficits in growth, rooting and snouting reflexes, and the ability to fixate and follow near stimuli visually.' **Ha et al. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology* 18:27-38 (1997)**

'In HIV-infected pregnant women treated with two RTIs [nucleoside analogue reverse transcriptase inhibitors, of which AZT was the most common] with or without protease inhibitors, one or more adverse events occurred in 29 out of 37 women and in 14 out of 30 babies.' **Lorenzi et al. *AIDS* 12:F241-F247 (1998)**

'[In a major review of data collected between 1986 and April 2004, ARVs were found to cause a] substantially increased risk of severely curtailed pregnancy [i.e. critical prematurity] ... coupled with a very high neonatal mortality rate.' **Thorne et al. *AIDS* 18(17):2337-2339 (2004)**

'Premature infants of HIV-positive mothers may be more likely to develop a rare, but potentially fatal, bowel condition, according to French research [by Desfrere et al.] published in the September 23rd [2005] edition of *AIDS* [19:487-1493]. In a retrospective study the investigators found that having an HIV-positive mother was an independent risk factor for developing necrotising enterocolitis in babies born before the 37th week of pregnancy. The investigators suggest that mitochondrial toxicity, resulting from the use of AZT to prevent mother-to-child transmission of HIV, is a possible cause. ... Necrotising enterocolitis is a gastrointestinal disease which can affect premature infants and can result in destruction of the bowel. ... Of the 30,000 infants born at the investigators' unit, 4009 were premature. A total of 79 (2%) of these premature infants developed necrotising enterocolitis. The incidence of necrotising enterocolitis was 2%

(72/3931) in the premature infants of HIV-negative mothers, but 9% (7/78) in the premature infants of HIV-positive mothers. None of the seven infants born to HIV-positive mothers were infected with HIV. ... All seven infants with necrotising enterocolitis and an HIV-positive mother received doses of AZT to prevent mother-to-child transmission of HIV. Six of the seven mothers were also taking anti-HIV therapy; in two this consisted of AZT monotherapy, the other four women were taking a three-drug combination (AZT or ddI with 3TC and a protease inhibitor).’ **Michael Carter, *AIDSmap News*, 7 September 2005**

‘Children born to HIV-positive women who take antiretroviral therapy (ART) during pregnancy are significantly smaller in terms of height, weight and head circumference compared with children born to HIV-positive women not on ART, or who took monotherapy, according to the results of a European study examining the effects of ART on uninfected children’s growth up to the age of 18 months. [‘Does exposure to antiretroviral therapy affect growth in the first 18 months of life in uninfected children born to HIV-infected women?’ European Collaborative Study, *JAIDS* 40(3):364-370, 2005] **Edwin Bernard, *AIDSmap News*, 3 November 2005**

‘Antiretroviral drugs (ARV) as prophylaxis to prevent mother-to-child transmission of HIV results in decreased haematological parameters during and shortly after exposure, with recent data suggesting a more prolonged inhibition of haematopoiesis until at least 18 months [*i.e.* ARV drugs given to pregnant women cause persistent bone marrow suppression reducing blood cell production]. In uninfected children ... ARV exposure [before birth was] associated with reduced neutrophil count until at least 8 years of age. ... A considerably longer effect of exposure to ARV was shown in uninfected children than previously thought.’ **European Collaborative Study, *AIDS* 18(15):2009-17 (2004)**

‘The study cohort included 92 HIV-1-infected and 439 uninfected children ... Antiretroviral therapy (nonprotease inhibitor) was independently associated with FTT [*Failure to Thrive*] in our cohort ... ZDV [AZT], in particular, alters mitochondrial metabolism and may have direct nutritional effects.’ **Miller TL et al. *Pediatrics* 108(6): 1287-96 (2001)**

‘... the government’s refusal to introduce a national programme to counter transmission of HIV from pregnant mothers to their infants ... as documented in its court papers and in argument on its behalf before the High Court and Constitutional Court, was based in large measure on the alleged toxicity of the drugs – a tenet central to the entire conspiratorialist theory of the AIDS denialists.’ **Judge Edwin Cameron, address to the Harvard Law School, published by the *Mail&Guardian* as ‘The Dead Hand of Denialism’, 17 April 2003**

‘Children exposed to AZT in the womb are not at high risk of “brain damage, neurological disorders, paralysis, spasticity, mental retardation, epilepsy, other serious disorders and early death.” The opposite is true. When AZT is used by a pregnant woman to reduce the risk of transmitting HIV to her child, the child is much less likely to contract HIV and much more likely to live a healthier, longer life.’ **Professor Robin Wood, affidavit in Case 2807/05, High Court, Cape Town, 17 April 2005**

‘I hesitate to call Anthony Brink a liar, but in my reading of the mainstream medical literature I have failed to come across the “hundreds of studies indicating the profound toxicity to all human cells of AZT” and the numerous studies showing that babies

exposed to AZT in the womb suffer brain damage, et cetera. ... Why is the “enormous, growing corpus of little-known research literature in the medical/scientific press concerning the serious toxicity of AZT and nevirapine” so little known? Could it be garbage?’ **Professor Cecil Karabus, Red Cross Children’s Hospital, Cape Town, Mail&Guardian, 18 November 2005**

‘There is no evidence that has been tabled showing that AZT is toxic to either mother or child.’ **Mark Heywood, director of the AIDS Law Project, and national treasurer of the TAC, CNN, 1 April 2000**

‘If they’re not going to provide us with AZT, then the best thing that the government can do is to ask us to strangle them all at birth.’ **Glenda Gray, director of the Paediatric AIDS Unit at Chris Hani-Baragwanath Hospital, Washington Post, 16 May 2000**

‘There is a critical need to develop effective drug treatments to combat RT dependent viruses such as HIV. Such efforts were recently urged in the United Kingdom-Irish-French Concorde Trial conclusions which reported that the nucleoside analog zidovudine (AZT), a mainstay in the treatment of patients infected with HIV-1, failed to improve the survival or disease progression in asymptomatic patients.’ **Procedure to block the replication of reverse transcriptase dependent viruses by the use of inhibitors of deoxynucleotides synthesis: United States Patent 6,046,175. Granted: April 4, 2000. Application No: 245259. Filed: May 17, 1994. Inventors: Lori; Franco (Parma, IT); Cara; Andrea (Rockville, MD); Gao; Wen-Yi (Rockville, MD); Gallo; Robert C. (Bethesda, MD)**

‘Extended follow-up of patients in one trial [of AZT], the Concorde study, has shown a significantly increased risk of death among the patients treated early.’ **Phillips et al. New England Journal of Medicine 336:958-959 (1997)**

‘Anti-retroviral drugs can extend life for many years.’ **US President George W Bush, State of the Nation address, 27 January 2003**

‘Among the top corporate donors at Wednesday’s [Republican Party] fund-raiser were GlaxoSmithKline, a multinational drug giant, which gave at least \$250,000, according to the Washington Post.’ **‘Bash Rakes In \$30 Million’ (at a record-breaking dinner-plate event organised by GlaxoSmithKline’s president of pharmaceutical operations, Robert Ingram), CBS, 20 June 2002**

‘GSK is a leader in bringing HIV/AIDS treatments [such as AZT] to patients ... and is committed to improving the quality of human life by enabling people to do more, feel better and live longer.’ **GlaxoSmithKline’s current marketing mantra**

‘People are dying, people whose lives could be extended by getting the right drugs. ... Let’s stop playing marbles and roll up our sleeves and invoke the spirit that fought apartheid. We did it with apartheid, we can repeat it with AIDS.’ **Former Anglican Archbishop Desmond Tutu, Newsmaker, SABC2 television, 7 October 2001**

‘Yes, our government ought to be providing the drugs that extend people’s lives.’ **Desmond Tutu, e.tv, 1 December 2001**

'For those who are HIV-positive, we must ensure that they get the proper treatment and drugs which are going to help them resist the pandemic. ... We must combine various strategies, firstly giving people the necessary drugs to try and prevent the disease taking the upper hand.' **Former President Nelson Mandela addressing schoolchildren in Nyanga community hall, Cape Town, 1 December 2001**

'We must find the means to take life-saving treatment to all who need it, regardless of whether they can pay for it, or where they live or whatever reason.' **Nelson Mandela, 14th International AIDS Conference, Barcelona, Spain, 7 July 2002**

'We ... learnt with great sadness that Anneline's economic position made her unable to take antiretrovirals earlier. This again emphasises the need for us to make treatment available in the public sector and in places accessible to those who cannot afford otherwise.' **Nelson Mandela on the death of singer Anneline Malebo, *Mercury*, 16 August 2002**

'... there are safe and effective pharmaceuticals available today which can alleviate suffering and extend life. These drugs have proved safe and effective around the world.' **Anglican Archbishop Njongonkulu Ndungane, *The World with a Human Face: A Voice from Africa* (Cape Town: David Philip, 2003)**

'With great honesty the TAC has always tried to understand medical science. And this is something with which all South Africans have always struggled. We are scientifically illiterate.' **Zackie Achmat, *Rapport* (translated from Afrikaans), 10 February 2002**

'TAC militants have used songs about fluconazole and Pfizer – this is part of our treatment literacy. We have songs on AZT, nevirapine and soon we will have songs on co-trimoxazole.' **Zackie Achmat, addressing the Context International Conference on HIV/AIDS, University of the Witwatersrand, 7 April 2001**

'... anti-retroviral drugs essential to fighting HIV/AIDS ... would save millions of lives ... [Mbeki's professed concerns about the] alleged toxicity of anti-retrovirals [are merely] excuses [for not taking] advantage of the space won by the activists.' **Patrick Bond, 'Thabo Mbeki and NEPAD', published in *Thabo Mbeki's World: The Politics and Ideology of Thabo Mbeki*, edited by Sean Jacobs and Richard Calland (Pietermaritzburg: University of natal Press/Zed Books, 2002)**

'Long-term use of AZT does contain risks, including cancer.' **Peter Moore (GSK), in 'Truth and lies about AZT', *Mail & Guardian*, 1 December 1999**

(Voice-over) How does GlaxoWellcome react to new research which claims the drug causes cancer, birth defects and deaths? 'I'm not aware of the data that you've just mentioned to me.' **Peter Moore in *The Truth on AZT*, e.tv, 12 December 1999**

'For more than a decade, AZT has extended and improved the quality of life of millions of people living with HIV/AIDS around the globe, said Dr Peter Moore, Medical Director of Glaxo Wellcome South Africa, adding that hundreds of healthcare workers who have been exposed to the virus in the work situation have also benefited.' **GlaxoWellcome press release, 28 October 1999**

(Voice-over) We asked GlaxoWellcome for proof: how many people have in fact benefited from the drug? 'It is impossible for me to answer that question.' **Peter Moore in *The Truth on AZT***

'AIDS can now be compared with other chronic conditions, which on ['the new combination drug treatments'], and with proper care, can in the long term be subjected to successful medical management.' **Edwin Cameron JA, Jonathan Mann Memorial Lecture: 'The Deafening Silence of AIDS', at the 13th International AIDS Conference in Durban, 10 July 2000**

'The truth is, with the right medication, H.I.V./AIDS is like diabetes – it can be managed.' **Zackie Achmat, *New Yorker*, 19 May 2003**

'The post-1996 AIDS conference hype that "combination therapy including a protease inhibitor will make HIV a chronic, manageable disease just like diabetes" came back to haunt us.' **Carr and Cooper, *Lancet* 352 (S5):16 (1998)**

'[The combination antiretroviral therapy] "dam" is already leaking; there's high danger of it collapsing altogether. Failures are occurring right and left. [Doctors] should expect failure with whatever [antiretroviral drug cocktail they] first use. We should plan on it. We should prepare for it. Clinicians should expect failure. [The patient death rate is rising.] They aren't dying of a traditionally defined AIDS illness. I don't know what they're dying of, but they are dying. They're just wasting and dying. It is sobering; while we are making good guesses, they are just guesses. We don't know what we are doing.' **Professor Michael Saag, University of Alabama, co-editor, *AIDS Therapy* (New York: Churchill Livingstone, 1999), interviewed in *Esquire*, April 1999**

'We have seen colonization, we have seen imperialism, we have seen apartheid ... and all of them used against us as a people. [Africans have] won their liberation and now they are fighting another war and they are being psychologically terrorized once more because people want to sell [AIDS drugs] and make profits. And there is no benefit in those products. The only thing that can really happen is that once you touch the antiretrovirals you can go one way.' **Peter Mokaba, the *Star*, 4 April 2002**

'In my heart I believe it is not right to hand them [*AZT and other antiretroviral drugs*] out to my people.' **Dr Tshabalala-Msimang, launching an anti-TB campaign, c.15 March 2003**

'Murderer! ... Criminal! ... Resign! ... Manto go to jail! ... Manto go home! ... You exploit the hunger of our people by talking nutrition. ... You should take off your wig and sell it to feed the poor. ... I have a sweat because I'm angry. ... I'm telling you and Mbeki once and for all...' **Zackie Achmat disrupting the Public Health 2003 conference in Cape Town on 25 March 2003, objecting to Dr Tshabalala-Msimang delivering the opening address on account of her and President Mbeki's publicly stated concerns about the toxicity of AZT**

'The organisers of the conference have only themselves to blame for inviting this criminal.' **Zackie Achmat justifying his conduct immediately afterwards**

'[The TAC is] a pressure group whose salaries are paid by Americans. This is a conglomeration of drug-dealers who serve as marketing agents of toxic drugs.' **ANC Youth League spokesman Khulekani Ntshangase, Sowetan, 22 April 2003**

'Data on adverse events to antiretroviral treatment have been recorded in clinical trials, post-marketing analyses, and anecdotal reports. Such data might not be an up-to-date or comprehensive assessment of all possible treatment combinations defined as potent antiretroviral treatment. METHODS: Using a standard clinical and laboratory method, we assessed prevalence of adverse events in 1160 patients who were receiving antiretroviral treatment. We measured the toxic effects associated with the drug regimen ... FINDINGS: 47% (545 of 1160) of patients presented with clinical and 27% (194 of 712) with ['potentially serious'] laboratory adverse events probably or definitely attributed to antiretroviral treatment. Among these, 9% (47 of 545) and 16% (30 of 194), respectively, were graded as serious or severe. ... Compound specific associations were identified for zidovudine, lamivudine, stavudine, didanosine, abacavir, ritonavir, saquinavir, indinavir, nelfinavir, efavirenz, and nevirapine. INTERPRETATION: We recorded a high prevalence of toxic effects attributed to antiretroviral treatment for HIV-1.' **Fellay et al. Lancet, 358(9290):1322-7 (2001)**

'...as a result of toxicity and side effects among HCP ['health-care personnel'], a substantial proportion of HCP have been unable to complete a full 4-week course of HIV PEP ... Side effects have been reported frequently by persons taking antiretroviral agents as PEP ... In multiple instances, a substantial (range: 17%–47%) proportion of HCP taking PEP after occupational exposures to HIV-positive sources did not complete a full 4-week course of therapy because of inability to tolerate the drugs. **Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis, 30 September 2005**

'We don't have routinely collected side-effect data, but we do know that the serious side-effect incidences are less than one percent. Minor side-effects are probably between 10 and 15 percent.' **Dr Fareed Abdullah, Deputy Director General, Department of Health, Western Cape province and director of Western Cape AIDS Programme, Health-e News, 13 May 2005**

'We have had 400 people on antiretrovirals at university research centres and less than 1% have withdrawn and no one has died from the side effects of the drug[s].' **Dr Salim Abdool Karim, Sunday Argus, 8 May 2005**

'The US Food and Drug Administration (FDA) has issued a warning letter to manufacturers of AIDS drugs cautioning them to tone down the optimistic tenor of their antiretroviral ... billboard and magazine ... drug advertisements. Thomas Abrams, director of the FDA's division of drug marketing, advertising, and communications said that current antiretroviral advertisements directed at consumers are misleading as they fail to depict the limitations of AIDS drugs and also feature healthy looking people ... sexy and athletic models in the prime of health who were climbing mountains, sailing boats, and riding bikes. These are pursuits which are quite difficult for people with HIV infection, who have to take drugs several times a day that have debilitating side effects ... The advertisements therefore violate the Federal Food and Drug Act.' **British Medical Journal 322(7295):1143 (2001)**

'All 4 classes of antiretrovirals (ARVs) and all 19 FDA approved ARVs have been directly or indirectly associated with life-threatening events [*'grade 4' events, particularly 'liver related'*] and death. ... Our finding is that the rate of grade 4 events is greater than the rate of AIDS events, and that the risk of death associated with these grade 4 events was very high for many events. ... Cardiovascular events [are] associated with the greatest risk of death'. **Reisler et al. *Journal of Acquired Immune Deficiency Syndromes* 34(4):379-86 (2003)**

'I don't want to be pushed or pressurized by a target of three million people on antiretrovirals by 2005. WHO set that target themselves. They didn't consult us. ... It is not about chasing numbers. It is about the quality of health care we provide for our people. ... I will also continue to advise people on the side effects of ARVs. I cannot stand on a pedestal and say everything is hunky-dory. ... It is absolutely critical that our people know about the side effects, particularly because these are new medicines and not much is known about them. When we were being pressured to use ARVs we did warn about the side effects and, when I get reports about the people on ARVs, nobody presents to me how many people have fallen off the programme or died because of the side effects. I don't know what happens to those who started on antiretrovirals. ... There was a time when we were told to give everyone ARVs and we resisted. We were right, I think. ... When it comes to talking about the side effects I will always do it. ... We must be upright and frank about informing citizens about the use of ARVs. ... I'm not happy [with reports of how many people are being treated with them, and will] interrogate [the statistics to establish how many people had died of ARV toxicity]. I will continue to educate the people in this country about the side effects of ARVs ... you know me, I tell the truth.' **Dr Tshabalala-Msimang, media briefing at Union Buildings in Pretoria, 5 May 2005**

'I am surprised by the manner she draws up her amazing beliefs ... to speak of side effects [of ARVs] is contrary to what the scientific evidence suggests. ... Her actions could have severe implications for people and the image of the nation. Some form of censure should emerge [for her] careless and dangerous statements.' **Professor Jerry Coovadia, commenting on Dr Tshabalala-Msimang's remarks, *Sunday Independent*, 8 May 2005**

'[It's an] outrageous and dangerous thing to say [that people have died from the toxicity of ARVs].' **Dianne Kohler Barnard MP, Democratic Alliance spokeswoman on Health, *Sunday Independent*, 8 May 2005**

'The Minister is a disgrace [and] should be disciplined by the ANC for her remarks. ... Her conduct is undermining and embarrassing the government's own programme and policy.' **Mark Heywood, *Sunday Independent*, 8 May 2005**

'[Although the government appeared to have] crossed the bridge [Dr Tshabalala-Msimang's 'aggressive comments showed the commitment [to ARVs] was not genuine' (per *Sunday Argus* paraphrase)]. The stance on HIV/AIDS is a crime against the nation and history will come back to haunt them.' **Pieter Mulder, Freedom Front leader, *Sunday Argus*, 8 May 2005**

'Mampara of the week: Manto Tshabalala-Msimang. Health Minister Dr Manto Tshabalala-Msimang (First Leningrad Medical Institute 1962-1969) has been trying so hard not to put her foot in it that she has been silent on antiretroviral drugs over the last

three months. But the truth will out. ... The good doctor said she would continue to warn the public of [ARV] adverse effects. Strange that, for a minister who has okayed R3.4 billion in tenders to dispense them to the public.' **Hogarth, *Sunday Times*, 8 May 2005**

'Manto Tshabalala-Msimang, the health minister, has put her foot in it again. ... the minister's nonsensical statements are problematic. She ignores the fact that people are dying because of the slow roll-out ... It is worrying that she should issue warnings about the side effects of the very same anti-retrovirals the government is distributing. Why invest millions in an anti-retroviral roll-out and then cast doubt on the drugs? Tshabalala-Msimang's mixed signals ... come without a shred of evidence.' ***Sunday Independent* editorial (under the banner, SOUTH AFRICA'S QUALITY SUNDAY NEWSPAPER), 8 May 2005**

'Manto Tshabalala-Msimang, the health minister should go blonde. ... Is she dumb or just playing at it? ... when the immune system breaks down, medication is essential. ... She omitted to mention that anti-retrovirals prolong life. Instead she lamented that they take life. ... Right now the challenge is to get the minister off her pedestal. Now and forever.' **Maureen Isaacson, 'Second Take' column, *Sunday Independent*, 8 May 2005**

'There is no single clear intervention that can solely solve the challenges of people living with HIV and AIDS. I think we need to give South Africans options.' **Dr Tshabalala-Msimang opening of the Second National AIDS Conference in Durban, 7 June 2005**

'[Dr Tshabalala-Msimang's comments are] criminal.' **Mark Heywood, *Business Day*, 8 June 2005**

'The TAC's Zackie Achmat said it was regrettable that Tshabalala-Msimang was not taking her oath as a medical professional seriously. Not only had the minister of health consistently failed to support the government's ARV programme, but she was also underperforming in dealing with HIV ... "We seriously ask the president to consider seriously whether this minister is appropriate for the job."' ***Cape Times*, 28 June 2005**

'[The absence of a national patient information system makes it impossible to say] how many patients had dropped out of the programme, how many had died ... how many had been forced to change drugs because of dangerous side-effects.' **Dr Nomonde Xundu, Chief Director Department of Health HIV/AIDS Directorate, *Business Day*, 3 March 2006**

'[AZT, 3TC and nevirapine triple-therapy is an] almost miraculous new combination drug treatment. ... the new combination drug treatments are not a miracle. But in their physiological and social effects they come very close to being miraculous. ... antiretroviral treatment has broken the equation between AIDS and death. ... We don't need to suffer all these losses of our fellow countrymen and women. We don't need to suffer because the treatments are available to stop many, if not most, of those deaths. ... many, many tens and hundreds of thousands and even millions of people can be saved from a dreadful illness and death by a treatment plan on the part of the government now. ... In my own life, it's given me a second chance to live. And it's a wonderful thing. It's so mundane, it's so corny in a way to be alive and yet it's the most wondrous gift that one can have. And I feel deeply grateful for that, and I think it's a gift that should be put in the position, in the hands of so many more people. ... For most of

the people very ill with AIDS, for most of the people dying from AIDS now, treatment offers a realistic, a pragmatic intervention to save them from death. That's the fact – this isn't a position that I take. The truth is, if those treatments can be made available to them, they need not die of AIDS. It's as simple and as dramatic as that.' **Edwin Cameron JA, *Carte Blanche*, 4 November 2000**

'In contrast with many of my colleagues at SFGH [*San Francisco General Hospital*] in the AIDS program, I am not necessarily a cheerleader for anti-retroviral therapy. I have been one of the people who's questioned, from the beginning, whether or not we're really making an impact with HIV drugs and, if we are making an impact, if it's going in the right direction. ... I have a large population of people who have chosen not to take any antiretrovirals since I've been following them – since the very beginning. ... They've watched all of their friends go on the antiviral bandwagon and die.' **Dr Donald Abrams, Professor of Clinical Medicine, University of California, San Francisco, Assistant Director, AIDS Programme, San Francisco General Hospital, quoted in *Synapse*, October 1996**

'For South Africa, the significance of AIDS denialism is momentous. It has to be, since our president, President Thabo Mbeki, has publicly countenanced and officially encouraged it. ... The cost in human lives and suffering of denialist-inspired equivocation in national AIDS policy can be described only as horrendous. A leading AIDS activist, Zackie Achmat, has referred to government's policies – with resonant imagery – as “a Holocaust against the poor”. Death from AIDS is now avoidable. With carefully administered treatments, and subject to monitoring and with appropriate medical care, AIDS is no longer a fatal disease. I know this from my own life, which without those treatments would have ended three or more years ago. Neither as a person living with AIDS nor as a judge can I stand apart from the struggle for truth and for action about AIDS, and the role lawyers and the legal system are called to play in it. Both Holocaust and AIDS denial remind us of our own terrible weaknesses and vulnerabilities as humans, and of the reluctance we all feel to own them. But the struggle for truth they involve also inspires us to greater thought and action. For truth, classically, is freedom, and from freedom in truth comes the capacity to build and plan and act better. AIDS in Africa calls us with imperative force to unleash that capacity.' **Edwin Cameron JA, 'The Dead Hand of Denialism'**

'For me a miracle happened and I want that miracle to be available to other people where they can be given their lives back, be given a sense of well-being and efficacy and engagement and joy back in their lives. And I believe we can do that, we as South Africans can prevent four to five million deaths through effective medical care and treatment through the next decades.' **Edwin Cameron JA, SAfm, 2 October 2003**

'Some agitate for these extraordinary propositions with a religious fervour born by a degree of fanaticism which is truly frightening.' **President Thabo Mbeki in his letter to President Bill Clinton, Prime Minister Tony Blair, Chancellor Gerhard Schroeder, UN Secretary General Kofi Annan and other leaders, 3 April 2000**

'I have the support of my colleagues on the Appeal Court.' **Edwin Cameron JA, SAfm, 18 March 2003**

'Furthermore, the fact that the most common current cause of death among people with HIV is liver failure suggests that liver injury may be a major limiting factor in the

effectiveness of current HIV treatment.' **Justice et al. paper presentation at the 14th International AIDS Conference, Barcelona, July 2002**

'My tummy is getting a bit larger and people tell me I'm putting on weight. In fact I'm not putting on weight. My liver and some of the other inner organs are growing a bit larger from lipodystrophy ... organ thickening ... a minimal side effect.' **Edwin Cameron JA, SAfm, 18 September 2003**

"On the 28th of October, 1999, the President gave a speech in which he said AZT was toxic," said Edwin Cameron, the shock of it still fresh. "This signalled the start of an apparent courting of the AIDS denialists. ... Of course the drugs are toxic," said Mr. Cameron, almost trembling with exasperation. TAC recently lost three prominent activists whose bodies could not withstand the drugs. But there is no question among credible scientists, he said, that ARVs are the only thing that keep most people with AIDS alive.' **Edwin Cameron JA, *Globe and Mail* (Canada), 13 Sept 2003**

'I have no doubt that I have natural intellectual gifts.' **Edwin Cameron JA, *Daily Dispatch*, 13 November 2001**

'I talk to them [ARVs]. I say, "You're my allies. I want you to enter my virological system and I want you to fight with me against this alien invader."' **Edwin Cameron JA, MNet television show *Carte Blanche*, 4 November 2001**

'There is no doubt that [ARVs] work.' **Professor Jerry Coovadia, *Daily Mail&Guardian*, 10 April 2000**

'About 500 000 people in South Africa are in need of life-saving ARV medicines now, and the number is projected to rise to 1.4 million by 2009.' **Ljumba and others, 'Access to Antiretroviral Therapy', Health Systems Trust, 20 July 2004**

'The only intervention that has ever been shown to have a proven impact on mortality is ARV therapy.' **Dr Jim Kim, director of WHO's HIV/AIDS department, IRIN (Integrated Regional Information Networks), UN Office for the Coordination of Humanitarian Affairs, December 2004**

'There is overwhelming proof that anti-retrovirals work – in sharp contrast to the fuzzy mumbo-jumbo that constitutes "evidence" about the minister's claims about vitamins and traditional remedies.' **Diane Kohler-Barnard, *Cape Times*, 30 June 2005**

'There is overwhelming and conclusive evidence from local and international clinical trials to support the fact that ARVs improve and indefinitely prolong the lives of patients with Aids.' **Dr Kgosi Letlape, chairman, South African Medical Association, *Pretoria News*, 30 August 2006**

'It costs the government R7000 a year to keep someone alive on ARVs.' **Zackie Achmat, *Mail&Guardian*, 30 November 2006**

'Through this ['CIVIL SOCIETY PARTNERSHIP TO SAVE LIVES'], we want to ensure: ... That every one who needs antiretroviral treatment receives it in time.' **South African Council of Churches statement jointly issued with the TAC and other groups, 1 December 2006**

'The results of this collaborative study, which involved ... over 20 000 patients with HIV-1 from Europe and North America, show that the virological response after starting HAART [*Highly Active Antiretroviral Therapy*] has improved steadily since 1996. However, there was no corresponding decrease in the rates of AIDS, or death, up to 1 year of follow-up. Conversely, there was some evidence for an increase in the rate of AIDS in the most recent period. [We noted a] discrepancy between the clear improvement we recorded for virological response and the apparently worsening rates of clinical progression.' **The Antiretroviral Therapy (ART) Cohort Collaborative, *Lancet* 368:451-458 (2006)**

'The major findings are that, despite improved initial HIV virological control ... there were no significant improvements in early immunological response as measured by CD4-lymphocyte count, no reduction in all-cause mortality, and a significant increase in combined AIDS/AIDS-related death risk in more recent years.' ***Lancet* covering editorial commenting on 'these somewhat paradoxical trends'**

'Addressing the Cape Town Press Club ... [Southern African HIV/AIDS Clinicians Society president Francois] Venter said ARVs were a "modern medical miracle" that gave people 30 to 40 years of health.' ***Cape Argus*, 20 October 2006**

'Investment in ARV prophylaxis will save costs in AIDS-related treatment, as well as countless lives. ... We need to massively invest in public delivery systems, combined with a huge increase in uptake of voluntary counselling and testing.' **Dr Douglas Webb of the UN Children Fund's (UNICEF) Africa HIV/AIDS section, *IRIN*, 15 February 2007**

'Antiretroviral treatment restores the health of most people with advanced HIV disease and prolongs life-expectancy substantially (NIH, 2003).' **Nathan Geffen, TAC national manager, 'Encouraging Deadly Choices: AIDS Pseudo-Science in the Media', Centre For Social Science Research Working Paper No. 182, February 2007**

'I think AZT can only hasten the demise of the individual. It's an immune disease and AZT only further harms an already decimated immune system.' **Professor Jay Levy, Department of Medicine, University of California at San Francisco, *Newsday*, 12 June 1990**

'The Western Cape report showed that: – Out of a total of 4251 patients enrolled in 3 months, a total of 207 (4.8%) patients died. Out of the total of 2715 patients enrolled in 6 months, a total of 196 (7.2%) patients died. Out of the 914 patients enrolled in 12 months, a total of 114 patients (12.2%) patients died.' [*Plotted on a graph as X and Y values, these data reveal a perfect linear relationship between the death rate of people taking ARVs and the duration of their treatment; and they predict that within seven years everyone on ARVs will be dead.*] **Maupi Monyemangene, Media Liaison Officer, Department of Health, 6 October 2005**

'United Nations Special Envoy for HIV/AIDS in Africa Stephen Lewis expressed concern on Tuesday over Malawi's rising number of deaths among people receiving HIV/AIDS treatment in the country. Lewis was speaking at the end of his three-day visit to the impoverished southern African country when he was briefed by Malawian government officials that the country was grappling with an 11 percent death rate of people who were receiving free antiretroviral (ARV) drugs in public hospitals. Malawi has managed to increase the number of people receiving free ARVs from about 4,000 two years ago to

70,000 at present.' **'UN concerned about Malawi's rising deaths of AIDS patients on ARVs', China People's Daily Online, 1 November 2006**

'South Africa's Ministry of Health has confirmed that close to 6,000 HIV-positive people had died while receiving antiretroviral (ARV) drugs since the government rollout began in 2004 ... just below 3 percent of the number of HIV-positive people accessing treatment at government ARV sites during the same period. Health department spokesman Sibani Mngadi said ... "The number of people being treated with antiretroviral therapy through our 'Comprehensive Plan on HIV and AIDS' has increased [by] 60,000 in the past year to 235,378 by the end of September 2006." **'SOUTH AFRICA: Govt AIDS programme on course but people still dying', Reuters Foundation (Source: IRIN), 14 Nov 2006**

'Doctor Henry Sunpath, of McCord Hospital [said] that [the factors encouraging the deaths] "could be ... confusing information about the benefits of ARVs, as publicly expressed by the Health Minister Manto Tshabalala-Msimang herself." ... Sunpath's sentiments are shared by Dr Francois Venter, an HIV specialist at the University of Witwatersrand in Johannesburg, who charged that "it is conflicting views such as these which ... [motivate] scores of people who still turn down or prematurely quit ARV therapy because they are too afraid of the exaggerated side effects." **'SOUTH AFRICA: Govt AIDS programme on course but people still dying', Reuters Foundation (Source: IRIN), 14 Nov 2006**

'South Africa's strategy for combating AIDS has been shaped by a long-standing antipathy on the part of President Thabo Mbeki and his Health Minister towards antiretroviral therapy. ... It is precisely because Mbeki's undermining of the science of HIV treatment costs lives, that his position is so controversial. ... Mbeki was portrayed as severely out of step with scientific opinion ... and as stupidly pig-headed ... The most pernicious legacy of President Mbeki's dissident stance on AIDS has been the erosion of the authority of science and of scientific regulation of medicine in South Africa.' **Nicoli Natrass, economics professor, director of the AIDS and Society Research Unit, University of Cape Town, 'AIDS, Science and Governance: The Battle Over Antiretroviral Therapy in Post-Apartheid South Africa', Centre for Social Science Research Working Paper, 19 March 2006**

'Easily the most controversial official in her nation's government, Dr. Tshabalala-Msimang has been a target of AIDS activists and some medical experts since early this decade, when she publicly questioned the safety and effectiveness of conventional AIDS treatments like antiretrovirals for adults and drugs that hinder the transmission of H.I.V. from pregnant women to their unborn children.' **New York Times, 23 February 2007**

'Government's new five-year plan to combat HIV/AIDS will cost up to R45bn, according to treasury calculations contained in the latest working draft — significantly more than the R14bn already set aside over the next three years. The biggest slice of the money, up to 40%, is earmarked for AIDS drugs, which government hopes to be able to provide to four-fifths of those in need by 2011, according to the latest working draft, a copy of which has been seen by Business Day.' **Business Day, 13 March 2007**

'Our biggest success is that we got government to accept a treatment plan.' **Zackie Achmat, Mail&Guardian Online, 30 November 2006**

[A] distressingly high loss-to-follow up rates [was] reported by some large ART-dispensing facilities ... at the 3rd South African AIDS Conference. ... For instance, 27% of the first tranche of patients enrolled at King Edward VIII Hospital in Durban starting after April 2004 were “non-persistent” (defined as having failed to return for prescription refills for 90 days or more) within 12 months of starting ART. ... Dr Helen Schneider of the Centre for Health Policy at the University of Witwatersrand ... concluded about a third of these “drop-outs” were deaths.’ **AIDSmap.com, ‘Patient retention difficulties for South Africa’s public sector’ in ‘HIV & AIDS Treatment in Practice #90, August 31st, 2007’**

‘... Felege Hiwat hospital in Bahir Dar, in the northern Amhara region [Ethiopia] ... started over 3600 patients on ART by the end of 2006. However 22% of those patients were lost to follow-up ... Home visits and other enquiries were able to locate just 6% of patients, with a further 44% of the LTFUs discovered to be dead, and the remainder still missing. In South Africa, Klerksdorp Hospital in the North-West province ... the loss to follow-up rate ... reached 21%. The vast majority of those lost to follow-up defaulted during the first six months of treatment, but an audit of 300 patients lost to follow-up could only identify 126 deaths from local death records. The remainder were still out there somewhere, but, said Dr Ebrahim Variava [*without saying how he knew*], either their address details weren’t complete, or they weren’t answering their mobile phones.’ **AIDSmap.com, ‘HIV & AIDS Treatment in Practice #92, September 26th, 2007’**

‘... we conducted a systematic search of the English-language published literature, gray literature (project reports available online), and conference abstracts between 2000 and 2007. ... We included 32 publications reporting on 33 patient cohorts totaling 74,289 patients in 13 countries in our analysis. ... Under the worst-case scenario, 76% of patients would be lost by 2 y [*years*]. The midpoint scenario predicted patient retention of 50% by 2 y. ... losing up to half of those who initiate ART within two years is cause for concern. From the data as reported, attrition averaged roughly 22% at 10 mo [*months*] of follow-up. This average comprised mainly deaths (40% of attrition) and losses to follow-up (56%). ... we believe that actual attrition is higher than ... we report ... The midpoint scenario suggests that approximately half of all patients started on ART were no longer on treatment at the end of two years. ... A recent attempt to trace lost-to-follow-up patients in Malawi determined that 50% had died, 27% could not be found, and most of the rest had stopped ART ... those reporting on these cohorts do not know what ultimately happened to patients categorized as lost to follow-up ... our analysis is necessarily limited to publicly available reports and thus potentially subject to publication bias. Researchers may be less inclined to publish long-term outcomes from cohorts that have experienced very high early attrition. ... Better information on those who are lost to follow-up is urgently needed.’ **Rosen S et al. ‘Patient retention in antiretroviral therapy programs in sub-Saharan Africa: A systematic review’. *PLoS Med* 4(10): e298, October 2007**

‘We are proponents of AZT. ... Yes [it’s objectionable to] cast aspersions on AZT and nevirapine ... it’s dissident.’ **Mail&Guardian chief operations officer Hoosain Karjeiker to Adv Brink, 9 December 2004**

‘The position of the *Mail&Guardian* is that everyone is entitled to treatment. ... Our newspaper has been at the forefront of the push for antiretrovirals in this country. Our brand has suffered [from the publication of an article pointing out that ‘Hundreds of studies have found that AZT is profoundly toxic to all cells of the human body, and

particularly to the blood cells of the immune system' and that 'Numerous studies have found that children exposed to AZT in the womb and after birth suffer brain damage, neurological disorders, paralysis, spasticity, mental retardation, epilepsy, other serious diseases and early death.' ... Publishing [another article referring to 'the side effects of extremely toxic pharmaceutical drugs like AZT and nevirapine'] will continue to damage our brand.' **Mail&Guardian editor Ferial Haffajee to Adv Brink, 9 December 2004**

"Embedded" is now a thoroughly filthy word: it signals wholesale journalistic capitulation to ... interests that it should be the profession's job to dissect, not embrace.' **Mail&Guardian editorial deploring media cover of the American invasion of Iraq, 11 November 2003**

'This newspaper has always supported the need for an effective antiretroviral programme and will not in future [publish anything] which dilutes this message or creates confusion in the minds of readers.' **Mail&Guardian editor Ferial Haffajee, Mail&Guardian, 17 December 2004**

'If there is to be a way out of the nightmare of history, it will begin with a waking up to the complicity of the corporate mass media in mass murder.' **David Edwards and David Cromwell, Guardians of Power: The Myth of the Liberal Media (London: Pluto Press, 2006)**

'The mainstream media ... have failed us completely ... The subject [of pharmaceutical drugs] is just too damned uncomfortable to handle; too complicated, often deliberately, too scientific for the layman. Many hacks who should know better have been lunched, holidayed and bamboozled into silence. Fake nostrums are taken as gospel.' **John le Carré, London Spectator, 14 December 2000**

'In South Africa [public perceptions] are informed, mainly, by the media which forms part of the most reactionary forces among those offering consistent ideological resistance to transformation. It is a powerful tool of manipulation, information and propaganda. For example, in the 1995 Media and Market Research of Jocelyn Cooper it was indicated that 70 per cent of the people north of the Parktown Ridge get their information from the newspapers only. They normally do not consult other sources of information.' **Peter Mokaba MP, ANC Election Officer, Umrabulo Vol. 10, May 2001**

'TAC has developed an excellent national press strategy and profile. At no additional cost, the organisation has been able to secure regular space and retain its profile ... with the organisation relying almost exclusively on the media for its marketing.' **Treatment Action Campaign (TAC) Evaluation 29 June 2005'**

'It must be said that the role played by the media in forcing government to drop its HIV/AIDS denialism and implement a much more progressive policy has been extraordinary.' **Adjunct Professor Anton Harber, head of journalism and media studies at the University of the Witwatersrand, addressing the Goedgedacht Forum, Western Cape, 22 February 2007**

'Anthony Brink [is] No. 1 [among South Africa's] AIDS DISSIDENTS [and] so dangerous [that] the media [should] deny [his] dissident views publicity ... [In making known the research literature on the lethal toxicity of AZT and other ARVs, he merely tries to] hide behind the excuse of promoting scientific debate in order to promote views that are false

and dangerous. South Africa cannot let this continue any longer.' **'DEMOCRATIC ALLIANCE PUBLIC HEALTH WARNING!'**, October 2005

'Anyone persuaded not to take antiretrovirals ... is ... dying unnecessarily. ... Science and health journalists should talk to the editorial desk and letters editors and vice versa to ensure that AIDS denialist letters are spotted on arrival and spiked, not published.' **John Moore, Professor of Microbiology and Immunology, Weill Medical College, Cornell University, addressing the 'HIV Science and Responsible Journalism' symposium, XVI International AIDS Conference, Toronto, 13 August 2006**

'Brink ... has a twisted, perverse anti-science agenda that is based on him trying to "prove" the pre-conceived notion that AIDS is caused by the therapies used to treat it – an utter and manifest nonsense.' **Nathan Geffen, *Die Burger*, 2 December 2006**

'Mill's "free market of ideas" needs reinforcement with legislative inhibition on untruth²⁰. ... 20 Personal correspondence with Edwin Cameron.' **Nathan Geffen 'Encouraging Deadly Choices: AIDS Pseudo-Science in the Media', Centre For Social Science Research Working Paper No. 182, February 2007**

'That which the fascists hate above all is intelligence.' **Miguel de Unamuno, Spanish writer and philosopher, 1864-1936**

Q: 'What is next for you, after you leave the TAC?' Achmat: 'Politics (smiles). No, I don't want to become a parliamentarian ... but I want to make sure that we have good politicians.' [*How Achmat intends forcing South Africa's democratic representatives to be 'good politicians' and buy his drugs emerged in Law and Freedom, a documentary he made about the nevirapine and other cases, broadcast on SABC 1 on 21 February 2005, in which he 'pays tribute to TAC members who ... used the Constitution to achieve access to life saving treatment' (per TAC press release about the film). Filmed talking to Achmat in the corridors of the Constitutional Court, Judge Cameron reminds him of his aspiration, earlier confided, to get himself appointed as a judge of the Constitutional Court.*] **Zackie Achmat interviewed in the *Mail&Guardian*, 30 November 2006**

'I do not intend to engage in nonsensical debates on AZT ... I find the issues you raise a total waste of energy but perhaps more exciting for ignorant people in the field. ... Remember that I am the scientist and not you.' **Professor Malegapuru Makgoba (now chairman of the *Mail&Guardian* board) to Adv Brink c. 1999**

'[The medical and scientific research findings reviewed in *Debating AZT: Mbeki and the AIDS drug controversy* are] the ravings of [a] drivelling conspiracy-theorist, loony, crackpot, fruitcake. ... I'm a professional at spotting weirdos.' **David Beresford *Mail&Guardian*, 22 September 2000**

'The Internet has made it possible for every conspiracy theory to flourish. There are three basic versions of the H.I.V.-denial credo. ... The second argues that, even if the virus is harmful, the risks of antiretroviral drugs far outweigh the benefits: AIDS drugs are poisons, pushed by doctors corrupted by the pharmaceutical industry. The "poison" argument has been proved untrue in hundreds of studies across the globe, among women, men, drug users, homosexuals, and infants.' **Michael Specter, 'The Denialists: The dangerous attacks on the consensus about H.I.V. and AIDS', *The New Yorker*, March 2007**

'In my book [*Fit to Govern? The Native Intelligence of Thabo Mbeki*] I call the South African AIDS debate a "clash of fundamentalisms" in which frenzied denialists compete with AIDS-drug fundamentalists, while Mbeki wants reasoned debate for sustainable health & welfare infrastructure.' **Ronald Suresh Roberts, letter to Rachel Donadio, writer and editor, *New York Review of Books*, 8 December 2006 – having rated the manuscript of '*Just say yes, Mr President: Mbeki and AIDS*' 'Brilliant, fucking brilliant' and 'very funny; it made me laugh out loud' in June 2005, lauding its 'acid Swiftian wit' in his book *No Cold Kitchen* (STE, October 2005), having offered to write the foreword, quoting great swathes of it in the first draft of his AIDS chapter of *Fit to Govern*, and imitating its literary style (explaining, when cautioned that he risked being accused of plagiarism for this, 'I can't help it, your writing's infectious'); having described *Debating AZT: Mbeki and the AIDS drug controversy* as 'very good, very important' and *The trouble with nevirapine* as 'rigorous ... your best book'; and, a month after his letter to Donadio, repeatedly declaring Adv Brink's work to be 'extremely important ... extremely significant' at a meeting with journalist Celia Farber in New York on 4 January 2007**

'For years Mbeki has pandered to fringe commentators who question the incontrovertible link between HIV and Aids, retarding government's roll-out of the ARVs that might to date have saved hundreds of thousands who have succumbed to the disease.' **Tony Leon, 'SA Today', DA website, 24 March 2007**

'We have not been able to discover why doctors prescribe a toxic drug called AZT (Zidovudine) to people who have no other complaint than the presence of antibodies to HIV in their blood. In fact, we cannot understand why humans would take that drug for any reason.' **Kary Mullis PhD, 1993 Chemistry Nobel Laureate, in his foreword to *Inventing the AIDS Virus* by Professor Peter Duesberg (Washington: Regnery, 1996)**

'Look, there's no sociological mystery here ... It's just people's income and position being threatened ... That's why they're so nasty. In the AIDS field, there is a widespread neurosis among scientists ... there's just so much slowly accumulating evidence against them. It's really hard for them to deal with it. They made a really big mistake and they're not ever going to fix it. They're still poisoning people.' **Kary Mullis in 'Out of Control: AIDS and the corruption of medical science' by Celia Farber, *Harper's Magazine*, March 2006**

'... you are justified in sounding a warning against the long-term therapeutic use of AZT, or its use in pregnant women, because of its demonstrated toxicity and side effects. Unfortunately, the devastating effects of AZT emerged only after the final level of experiments were well underway, that is, the experiments which consisted of giving AZT to large numbers of human patients over a long period of time. Your effort is a worthy one ... I hope you succeed in convincing your government not to make AZT available.' **Professor Richard Beltz, inventor of AZT in autumn 1961, to Adv Brink, 11 May 2000**

Anthony Brink is an advocate of the High Court of South Africa and the convener and national chairman of the **Treatment Information Group**.

My books –

Debating AZT: Mbeki and the AIDS drug controversy

Poisoning our Children: AZT in pregnancy

The trouble with nevirapine

– can be read online at www.tig.org.za.

'Just say yes, Mr President': Mbeki and AIDS, in preparation, is an analytical history and multi-tack deconstruction of the AIDS treatment and causation controversies in South Africa.

This work is dedicated to the memory of my friend and collaborator
Sam Mhlongo, formerly Professor, Chief Specialist and
Head of Department, Family Medicine and Primary Health Care,
Medical University of South Africa.

TREATMENT INFORMATION GROUP

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