

# AIDS

## Update by Sean Hosein

The Canadian Medical Research Council has given a \$240,000 grant to researchers in Toronto who are to investigate a method that may restore the immune systems of people infected with HIV. Sadhna Joshi and Wayne Davies of Allelix Biochemicals and Alan Bernstein head of the division of molecular and developmental biology) at Mount Sinai hospital in Toronto have devised a plan based on the following data: HIV only attacks cells that carry the CD4 receptor molecule, such as the T4 white blood cell. The cells of the immune system develop from stem cells in the bone marrow. These stem cells do not have the CD4 receptor so they remain uninfected by HIV. Experiments on mice have revealed that a single stem cell can—by making many copies of itself—reconstitute the entire immune system. The scientists plan to alter the DNA of a human stem cell so that it would not let HIV replicate inside of it. The person's blood would then be blasted with radiation to kill all the HIV infected blood cells and then the genetically altered cells would be reintroduced in to the his/her body where they would form the new immune system's cells. These cells should be able to survive attacks by HIV and thus prevent AIDS.

One of the ways HIV is thought to bring about the collapse of the immune system is by damaging the

Thymus gland, a small gland in the neck that releases hormones which help the immune system function properly, one such hormone is called thymulin. A crucial part of the thymulin molecule is the metal zinc; without zinc, thymulin remains inactive. Blood samples taken from people with AIDS (PWAs) revealed that they had almost no active thymulin, and very low levels of zinc but a lot of the inactive form of thymulin. Tests on persons with ARC/PLS/PGL showed that their levels of thymulin and zinc were midway between those of PWAs and healthy controls, according to a letter to the *Journal of the American Medical Association* from researchers in Milan, Italy. It has been known for several years that persons suffering from HIV infection have much lower levels of zinc in their blood stream than uninfected persons. As a result of experiments they have conducted, the Italian scientists conclude that zinc supplementation should be able to convert the thymulin into its active form and thus improve the immune system of persons with HIV infection.

One of the few things that has remained constant about the AIDS epidemic is that we keep learning new things about the syndrome. A lack of an animal model for Human Immunodeficiency Virus makes it difficult to study and understand all

the different things that happen when HIV infects humans. Some questions that still remain unanswered are: why is it that some people infected with the virus die while others remain symptom free? Why does the virus stay latent for so long? Why do antibodies against the virus fail to stop it from infecting humans? Is there a co-factor involved? As to this last question, it has recently been shown that Herpes Simplex Virus type 2 (HSV-2), Epstein Barr Virus (EBV) and cytomegalovirus (CMV), either directly help HIV multiply faster or make the body more vulnerable to attack by HIV. Yet none of these viruses has been proven to be that elusive co-factor. An article in the journal *Nature* reporting on the transmission of HIV in heterosexuals, notes that none of the sexual partners of infected spouses in this study had a history of any prior sexually transmitted diseases. The author concluded that HSV-2/EBV/CMV could all be ruled out as co-factors in this case. The amount of sexual encounters did not appear to play a role in the development of AIDS in this study of 80 people, some of whom had nearly a thousand encounters and yet remained antibody negative.

While research is just getting underway against AIDS, studies on a similar disease in cats has been going on since the 1970's. Feline (Feline AIDS) infection in mature cats results in an asymptomatic period of one or more years followed by symptoms which worsen until the animal dies. These symptoms include "persistent infection, diarrhea, progressive weight loss, reduced levels of white blood cells and opportunistic infections," according to a recent article in the American journal *Science*. In

human AIDS, as well monkey AIDS, called SAIDS, the virus is difficult to find and in order to study the virus researchers have been forced to use infected blood cells grown in special solutions in the lab. In the case of FAIDS however, the virus is easy to find in the tissues of infected cats. The researchers have discovered that there is a type of virus from those cats which does not cause disease. And they have also found another related virus which causes FAIDS but can only do so with the help of the first virus. This FAIDS causing virus, called the variant, could not make copies of itself (replicate) without the other virus, called the helper. Only when both viruses are being produced can they co-infect and cause the lethal combination that results in FAIDS. This combination may take years to happen and is also thought to occur in birds suffering from infection by immunodeficiency viruses. The scientists note that the variant virus was not isolated from blood cells grown in the lab, from cats sick with FAIDS.

Recently, it has been reported that when blood cells taken from monkeys infected with SIV were grown in the lab, the virus they produced was a weaker version of the original virus. The scientists suggest that there may be a whole group of HIVs which remain undiscovered because of current techniques in virus propagation. They also said that these other viruses may only be isolated if fresh tissue samples are used. It is possible that a reaction between 2 or more of these (as yet undiscovered) viruses is what may trigger the collapse of the immune system which results in AIDS. The idea that there may be viruses which cause AIDS apart from HIV-1 and

HIV-2 has been given a boost with the discovery in the African countries, Ivory Coast Senegal, of PWAs who have found to lack antibodies to HIV HIV-2, according to an article in *Scientist*. In Finland, researchers the University of Helsinki have announced in a letter to the *England Journal of Medicine* that results on large numbers of gay there suggest the presence of a type of HIV.

Meanwhile researchers in Central African country of Zaire discovered that HIV-1 was present rural Zaire at an incidence of under 1% in 1976 and 12 years the rate has remained at the level. In an article in the *New England Journal of Medicine*, the research tell of an outbreak of Ebola which struck the remote town Yambuku in 1976, and during subsequent investigation over blood samples were collected. It had been kept in storage and in they were tested for HIV-1 antibody with hundreds of samples from the same area. Results indicated that 5 people were positive in 1976, 3 of whom died. Diseases associated with AIDS, survivors appeared healthy though one had reduced number of T4 cells. The samples from 1981 a similar number of positive results. This situation contrasts sharply with the results from large urban areas where between 1970 and 1981 rate of infection among pregnant women increased by a factor of 10. It is not clear why HIV has not been more widespread in rural Zaire. What aspect(s) of rural life carry risk for HIV infection.

—Sean H

## Talking Politics by George Smith— Homophobia in High Places

In the past two months the Supreme Court of Ontario has rendered two important judgments concerning the rights of lesbians and gay men. In March Mr. Justice Nicholson McKrae denied a lesbian couple OHIP family coverage, and in February, Justices Brooke, Blair and Mordean denied two gay men protection from video surveillance, and declared homosexuality to be grossly indecent.

The decision regarding OHIP family coverage centered on the definition of "spouse." Judge McKrae insisted that "spouse" can only be used for opposite-sex partners, and therefore only opposite-sex partners can claim spousal benefits from OHIP. He defended his legal opinion by pointing out that this is how "spouse" is defined in various other Ontario statutes.

The definition of "spouse," of course, is what the case was about. If heterosexuals continue to insist that "spouse" refers to an opposite-sex partner, then, of course, the partners of gay men and lesbians will continue to be denied the full benefits of the law. Mr. Justice McKrae's decision, in this sense, simply begs the question. What he does not seem to see is that his definition of "spouse" is heterosexualist. The Ontario Govern-

ment, in passing Bill 7, guaranteed lesbians and gay men, among other things, equal access to government services. It did this, in part, in order to make its Human Rights Code conform to the Canadian Charter of

Rights and Freedoms. What it now has to do is to bring provincial statutes into accord with the Human Rights Code. The place to begin seems to be with the definition of "spouse," not merely in the regulations governing OHIP, but in all areas of family law.

The facts of the second case are slightly more complex. Two gay men, in separate circumstances, were arrested for having sex in a public washroom. The evidence in each case depended on video surveillance. Both men were found guilty, one by a judge and the other in a jury trial.

With the assistance of the Right to Privacy Committee, they jointly appealed their convictions to the Supreme Court of Ontario. There were two grounds of appeal: first, the gross indecency provisions of the Criminal Code are unconstitutional; secondly, that video surveillance is an infringement of privacy rights.

The issue of gross indecency has been overtaken by parliament who recently repealed Section 157 of the Criminal Code. Nonetheless, the arguments of the Court were virulently homophobic. In arguing that the gross indecency provisions of the Code are not unconstitutionally vague, the Court noted that, viewed "objectively," for conduct to amount to gross indecency it must be "...a marked departure from decent conduct expected of the average Canadian...." Again, the "average Canadian" is defined as hetero-

sexual. And again, the argument is circular. How can the rights of sexual minorities be included in the notion of "average Canadian?" The answer is, they cannot.

In this instance, however, the Court perhaps sensed the problem of its own heterosexism. It went on to say that "...there is little practical prospect that the law respecting gross indecency (ss.157 and 158, and their judicial interpretation and application) would deter people from engaging in private in any form of sexual activity which does not involve the infliction of harm." Further, it said that as a practical matter the issue of regulating sexual behaviour was merely one of "common sense and ordinary decency".

In its deliberations, confined as it is to a realm organized entirely in documents, the court failed to see that in the real world of public washrooms, the distinction between public and private is not all that clear. Convictions in both cases, in fact, did not hinge on common sense as the basis of decency, but on the Code's official definition of public and private. In both cases, the gay men involved took such good precautions to protect their privacy and public decorum that the police claimed that video surveillance was the only way they could get the evidence they needed for a conviction.

In one case, for example, lookouts were posted at the door of the washroom to warn of anyone approaching the facility who might be offended.

The court described this common-sense practice in a somewhat paranoid way as the gay men involved intending "to take over the public washroom as their meeting place." It went on later to say that using the Charter to defend this kind of common sense behaviour would be "to make a haven from search of a public place used for criminal conduct." The conduct is "criminal" because it is "indecent" and "in public." And this is because of the way the Code defines "indecent" and "public," quite apart from whatever common sense precautions gay men might take.

In the meantime, parliament has repealed the gross indecency section of the Code because it probably could not survive a challenge under the equality provisions of the Charter. As the court in this case pointed out, the charge of gross indecency, added to the Canadian criminal law in 1890, "was confined to conduct between male persons."—clearly a heterosexualist statute. Even after the Code was revised in 1954, to cover heterosexual behaviour, gross indecency has virtually always been used to suppress homosexuality.

What, however, remains of this judgment and what is clearly disturbing is, first, that it attempts to lull people into thinking that common sense is the touchstone of public morality, which is clearly not the case. Secondly, that gay men and lesbians should depend on the practices of the police and the courts, rather

than on the law, to ensure their sexual freedom. And lastly gay and lesbian citizens can have a "reasonable" expectation of privacy, one that is prospectively enforced by the law, without enforcing the law, without slightest consideration for their rights.

This judgment leaves intact criminality (i.e., indecency, homosexuality and the right to government to enforce the law, than anything else, it is this application to homosexuality that is responsible for the police view of gays and lesbians as a criminal minority. The consequences this has in terms of police surveillance and protection striking feature of the facts in judgment is the amount of "vigilance" the police were able to muster about the men who quented the washroom in Silver Park for sex. It appears as if the extensive dossiers on homosexuals at least in smaller urban centres can be quickly collated for the purpose of criminal prosecution.

Given the criminal character of homosexuality, the court decided that the men who were arrested no "reasonable expectation of privacy. One can only expect privacy in a public washroom cubicle is involved in the "expected" facilities. But even then the might be looking in—quite leg

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