

1-18-2012

HIV/AIDS in the Context of Science and the Law

Michael Herman
McMaster University

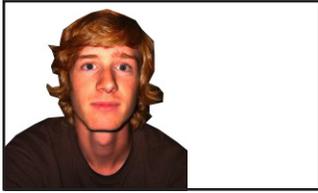
Follow this and additional works at: <http://digitalcommons.mcmaster.ca/meducator>

Recommended Citation

Herman, Michael (2008) "HIV/AIDS in the Context of Science and the Law," *The Meducator*: Vol. 1: Iss. 12, Article 6.
Available at: <http://digitalcommons.mcmaster.ca/meducator/vol1/iss12/6>

This Research Article is brought to you for free and open access by DigitalCommons@McMaster. It has been accepted for inclusion in The Meducator by an authorized administrator of DigitalCommons@McMaster. For more information, please contact scom@mcmaster.ca.

HIV/AIDS in the Context of Science and the Law



Michael Herman

THE HIV/AIDS PANDEMIC IS NOT SIMPLY A BIOMEDICAL PROBLEM – THE DISEASE ALSO HAS IMPORTANT SOCIAL AND POLITICAL IMPLICATIONS. ONE OF THE CONTROVERSIAL ISSUES IS THE CRIMINALITY ASSOCIATED WITH HIV TRANSMISSION. THIS ARTICLE WILL EXAMINE THE LEGAL POSITION THAT CANADA HAS TAKEN TO HELP LIMIT HIV/AIDS TRANSMISSION.

Human Immunodeficiency Virus (HIV) has become a prominent topic in the last few decades. It is a virus that can lead to Acquired Immunodeficiency Syndrome (AIDS), a disease that affects countless people worldwide. In the July 2002 issue of *The Lancet*, experts from various organizations, including the United Nations AIDS Agency and the World Health Organisation, announced that within the next eight years approximately 45 million people would contract HIV (Watstein & Stratton, 2003). This prediction is a terrifying reminder of the global prevalence of HIV/AIDS (Figure 1). Attention is usually focused on developing regions like Africa; however, HIV and AIDS also impact various facets of society in Europe and North America. According to famous American essayist Susan Sontag, “like the effects of industrial pollution ... the AIDS crisis is

evidence of a world in which nothing important is regional, local, limited; in which everything that can circulate does, and every problem is, or is destined to become, worldwide” (Sontag, 2006). The AIDS pandemic is not simply a biomedical problem, there are also important social and political issues to consider. This article describes the legal position that Canada has taken in the preclusion of HIV transmission.

THE SCIENCE BEHIND HIV/AIDS

Many experts agree that HIV most likely evolved from a retrotransposon. These are sections of genetic code that migrate from one locus to another by first being transcribed into ribonucleic acid (RNA), and then reverse transcribed back into deoxyribonucleic acid (DNA) at another location. It is

A global view of HIV infection

38.6 million people [33.4-46.0 million] living with HIV, 2005

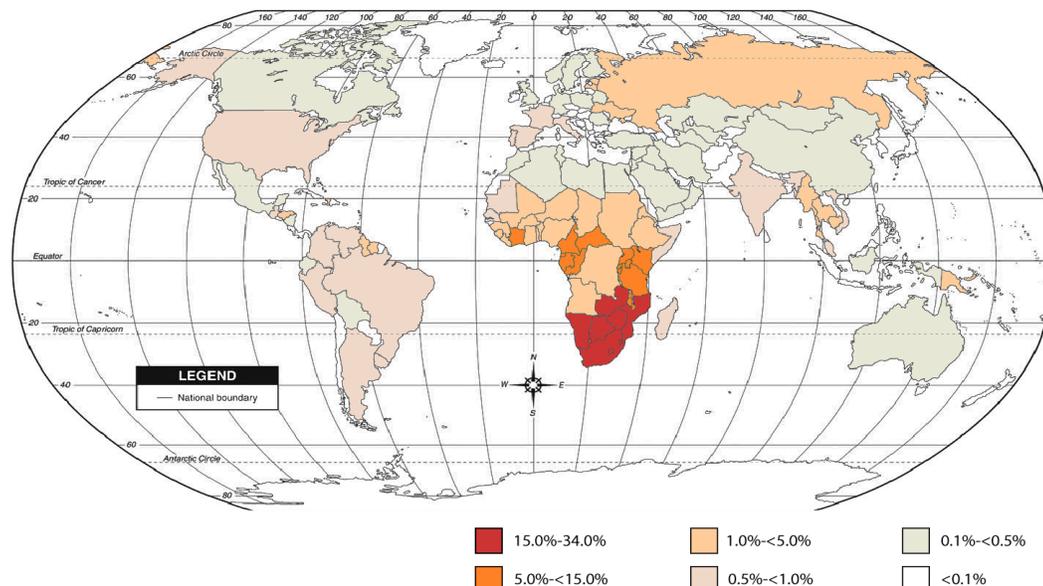
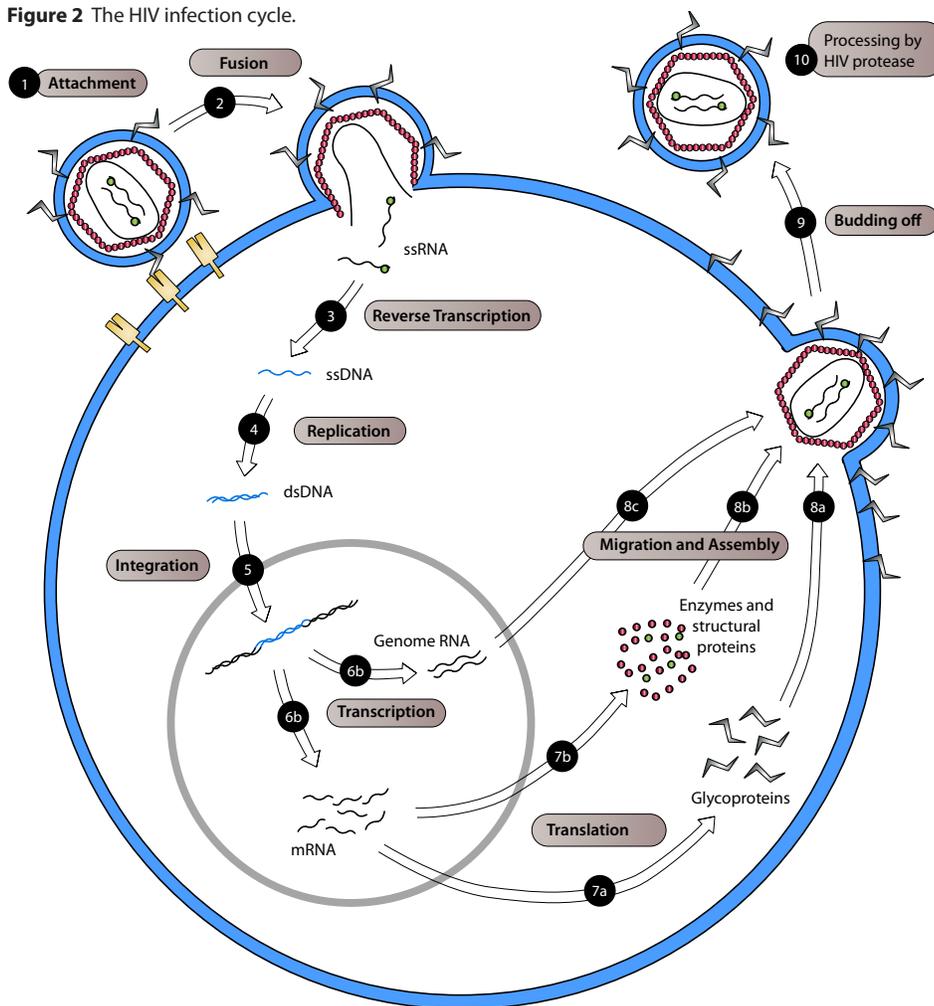


Figure 1 A United Nations' geographical representation of the global prevalence of HIV.

believed that after gaining additional genetic code, the retrotransposon, was able to leave the cell like a virus (Friedman-Kien, 1996).

HIV is a retrovirus that contains a RNA genome associated with enzymes that allow for reverse transcription into the host cell's genome. The capsid of the virus is covered by a lipid bilayer of gp120 surface proteins (Karp, 2008). The targets of HIV are helper T-cells (Th), particularly CD4+ cells that express a surface protein which binds to gp120, facilitating entry of the virus into host Th cells (Watstein, 2003). Once inside, the RNA genome is reverse transcribed into the CD4+ cells' genome (Figure 2). The virus' non-lysogenic replication cycle allows many copies of the virus to be made while the infected cell remains dormant (Figure 3). It is this characteristic of replication without CD4+ cell lysis that explains why people with HIV remain free from AIDS for varying lengths of time. As such, non-symptomatic individuals may pass on the virus to others.

Figure 2 The HIV infection cycle.



THE LAW BEHIND HIV/AIDS

When looking at the legal aspects of HIV, one encounters numerous ethical and social issues, one of the most important being the criminality of the transmission of HIV. In common law (or case law), outcomes of past cases are referenced when making decisions for new cases (Hill & Hill, 2005). Cases that are recent, local, and from higher levels of court are given greater consideration (Ross, 2006). Therefore, recent Canadian cases of HIV transmission contribute to understanding what legal steps Canada is taking to prevent the transmission of HIV. Also, these cases demonstrate the criminality and consequences associated with HIV transmission. In Canada, the ethical and legal onus

rests on individuals with HIV to disclose their HIV-positive status where sexual activity poses "significant risk of serious bodily harm" (Betteridge & Alexandrova, 2004).

R. v. WALKEM

The case of *R. v. Walkem* in 2007 is an example of a HIV transmission case that can act as precedent. The ruling by Superior Court Justice Arthur Gans in Toronto found Vincent Walkem guilty on two counts of aggravated sexual assault for "[endangering] the lives of two former girlfriends by engaging with them in repeated acts of unprotected sex when he knew he had tested positive for HIV" (Gans, 2007). Mr. Walkem, after learning he was HIV positive and being repeatedly warned

by health officials to notify his sexual partners, engaged in unprotected sexual relations with two women whilst not revealing his condition. The main ethical issue in this case is the balancing of the rights of the victims to be free of a deadly disease against the defendant's right to privacy. However, human life is generally considered more important than privacy. When guilt has been firmly established, what kind of sentence should be given for the willing and deceitful transmission of HIV? This legal dilemma was addressed by Judge Gans: "It is in cases of this nature where an aggravated assault is perpetrated by knowing HIV-carriers that the sentencing objectives of deterrence and denunciation are paramount, requiring as it does the imposition of a sentence of imprisonment rather than a

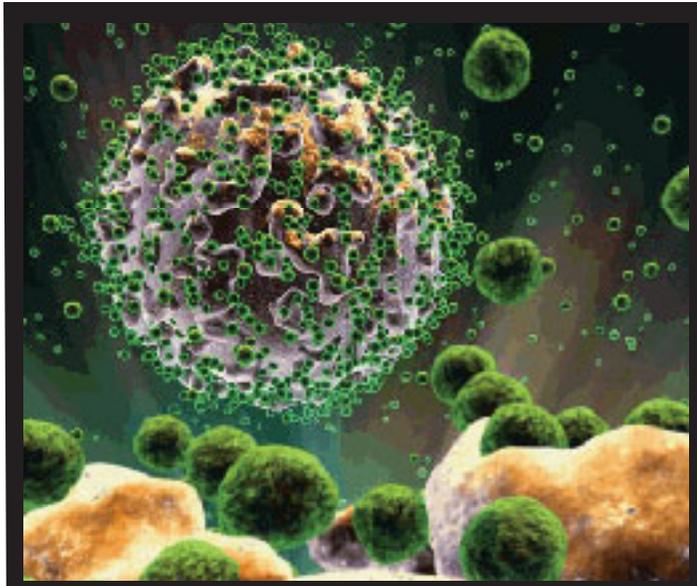


Figure 3 HIV viral particles infecting a T cell.

conditional sentence” (Gans, 2007). In other words, the crime is considered serious enough that there is a pressing need to impose imprisonment, rather than alternative punishments such as house arrest, community service or probation.

R. v. LEONE

Carl Leone, originally charged with 20 counts of aggravated sexual assault for having sexual relations with 20 women after finding himself to be HIV-positive, pleaded guilty to 15 counts of aggravated sexual assault in April 2007 (Canadian HIV/AIDS Legal Network, 2007). Similar to the aforementioned case with *R. v. Walkem*, the Canadian court associated serious charges with the deceitful transmission of HIV. However, in *R. v. Leone* the courts took a step further and ordered the accused to undergo psychiatric evaluation to determine whether or not Leone should be classified as a dangerous offender (Canadian HIV/AIDS Legal Network, 2007). In Canada, incarceration, involving the complete removal of an individual’s personal freedom, is viewed as the most severe form of punishment. For this reason, jail sentences are usually capped at 25 years; however, if an individual is declared to be a dangerous offender, the 25-year cap is waived and they face a sentence of indefinite imprisonment (subject to review every seven years). The fact that Leone was even evaluated as a possible dangerous offender meant that in Canada, the failure to disclose one’s HIV status to sexual partners is considered on par with the most severe of crimes.

What implications do these rulings have on society? Canada is a country that takes the transmission of HIV

very seriously, and harshly punishes individuals who fail to disclose their HIV status to their partners. It is the legal responsibility of individuals infected with HIV/AIDS to inform their sexual partners of their condition. Canada understands that social and legal deterrents need to be put in place to complement scientific approaches of controlling the spread of HIV.

LOOKING TO THE FUTURE

Society has more knowledge about HIV and AIDS now than ever before, and it is imperative to disseminate this knowledge so that everyone may benefit from it. This may include setting up more sexual health clinics so that the necessary information is more readily available, targeting schools to educate youth about the dangers of unprotected sex, and making sure the general population understands the legal responsibilities of HIV-positive individuals. HIV is a pandemic, and, in the words of Nelson Mandela, “Education is the most powerful weapon which you can use to change the world.” 

REFERENCES

- Betteridge, G., & Alexandrova, A. (2004). Disclosure of HIV status – developing resources for community based AIDS service organizations. Abstract presented at the 15th International AIDS Conference, Bangkok, Thailand, abstract no. MoPeE4127. Retrieved March 15, 2008, from the National Library of Medicine database.
- Canadian HIV/AIDS Legal Network. (2007). Man accused of failing to disclose HIV- positive status convicted of 15 counts of aggravated sexual assault. *HIV/AIDS Policy & Law Review*, 12, 2/3.
- Derlega, V. J. (2004). Reasons for HIV disclosure/nondisclosure in close relationships: Testing a model of HIV–disclosure decision making. *Journal of Social and Clinical Psychology*, 23, 747-767.
- Friedman-Kien, A. E., & Cockerell, C. J. (Eds.). (1996). *Color Atlas of AIDS*. (2nd ed.). Philadelphia: W.B. Saunders Company.
- Hill, G., & Hill, K. (2005). *The Legal Dictionary*. Viewed November 13th from <http://legal-dictionary.thefreedictionary.com/case+law>.
- Karp, G. (2008). *Cell and Molecular Biology: Concepts and Experiments*. Indianapolis: John Wiley & Sons, Inc.
- Regina v. Walkem*. (2007). CanLII 742 (ON S.C.).
- Ross, M. (2002). An Advocates Toolbox. *Michigan Bar Journal*, 81, 24-28.
- Sontag, S. (2006). “Like the effects of industrial...” *The Columbia World of Quotations*. Ed. Robert Andrews, Mary Biggs, and Michael Seidel. Columbia University Press, 2006. eNotes.com. 2006. Retrieved Oct 29th, <http://www.enotes.com/famous-quotes/like-the-effects-of-industrial-pollution-the-aids>.
- Watstein, S., & Stratton, S. (2003). *The Encyclopedia of HIV and AIDS*. (2nd ed.). New York: Facts on File, Inc.