



BC Health Minister Michael de Jong (left), Prof. Stephen Toope (centre), president and vice-chancellor of UBC, and Dianne Doyle, president and CEO of Providence Health Care applauded the recent recognitions by top media for the Treatment as Prevention strategy to help curb the spread of HIV and AIDS.

International acclaim marks breakthrough year for Treatment as Prevention

Science and *Time* among top media to recognize HIV strategy

"Treatment as Prevention" was named the #1 breakthrough of the year by *Science*, a top-10 medical breakthrough by *Time* and a 2012 medical breakthrough by *Readers Digest Canada*.

The December 2011 issue of *Science* highlighted the 96 per cent prevention of HIV transmission described by the HPTN 052 study as the rationale for naming HIV Treatment as Prevention the breakthrough of the year. The results were reported by Dr. Myron Cohen at the International AIDS Conference in Rome last summer.

The announcements were made as newly released statistics showed a reduction of nearly 65 per cent in new HIV diagnoses in B.C. in 2010—to 301 cases, down from the 850 cases diagnosed annually prior to 1996. A January 2012 *New York Times* article noted that as a result of the implementation of the Treatment as Prevention strategy, by the BC Centre for Excellence in HIV/AIDS (BC-CfE), B.C. is showing decreasing trends in AIDS diagnoses and HIV/AIDS mortality. The article also noted that Treatment as Prevention has resulted in B.C. being the only province in Canada to show a decreasing rate of new HIV diagnoses.

"B.C. is exceedingly proud of its role in developing, implementing and proving the Treatment as Prevention strategy, and we hope the advancements made and recognition received in 2011 will be a springboard to worldwide implementation," said B.C. Health Minister Michael de Jong.

The Treatment as Prevention strategy advocates rapid testing and administration of highly active antiretroviral therapy (HAART) for people who are found to be HIV-positive and medically eligible. HAART reduces HIV in the blood and sexual fluids to undetectable levels. This prevents HIV from progressing to AIDS and reduces the likelihood of HIV transmission by more than 96 per cent.

Dr. Myron Cohen led an international team of researchers on the HPTN 052 clinical trial, which was recognized as the breakthrough of 2011 by *Science*. The trial involved more than 1,700 couples on four continents. Antiretroviral drugs were administered to half of the HIV-positive people and treatment was delayed to the other half. *Science* described the results of early treatment as "dramatic" in lowering the rate at which the HIV-free partners become infected, while also improving outcomes for the infected partner.

"The HPTN 052 trial provides elegant and definitive proof that HAART is the most effective means of preventing HIV transmission," said Dr. Julio Montaner, director of the BC-CfE and one of the pioneers of the Treatment as Prevention strategy. "In addition, HAART allows for the immunity to recover and thereby prevents progression to AIDS and premature death, so that HIV-infected persons are able to lead a near-normal life."

Dianne Doyle, president and CEO of Providence Health Care (PHC), applauded the impact that B.C.'s research and advocacy of Treatment as Prevention has had on the lives of patients. "As home to the BC-CfE, PHC is very pleased that our research is contributing to set new standards in the fight against HIV and AIDS globally," said Doyle.

Stephen Toope, president and vice-chancellor of the University of British Columbia (UBC) and BC-CfE partner joined Doyle in crediting Treatment as Prevention for revolutionizing HIV patient care in the province of B.C. "An HIV diagnosis in B.C. is no longer a death sentence," said Toope.

While Dr. Montaner applauded the global recognition of Treatment as Prevention, he also signaled the need for strong political will to further expand this proven model and win the fight against HIV/AIDS. "The results here in B.C. show that it is possible to bring HIV and AIDS under control using Treatment as Prevention as the cornerstone of our strategy," said Dr. Montaner. "The opportunity is now for us to further this strategy in the rest of Canada and abroad. But it will take leadership and vision from our political leaders to bring about an AIDS-free generation."



» Millions of people in poor countries are relying on the Global Fund to stay alive and healthy so that they can lead normal, productive lives. But millions of others may not be reached by treatment because we lack the financial resources further to expand health programs on the scale that is required."

- Michel Kazatchkine, executive director, The Global Fund to Fight AIDS, Tuberculosis and Malaria, quoted in Dr. Montaner's column calling upon the federal government and Canadian companies to do more to replenish The Global Fund to fight HIV/AIDS. The column was published in *The Hill Times* on January 23, 2012.



BC-CfE presents at international scientific meeting in Vancouver



Dr. Alan Leshner, CEO, American Association for the Advancement of Science

More than 8,000 scientists and researchers, including leaders from the BC Centre for Excellence in HIV/AIDS (BC-CfE), will descend upon Vancouver from February 16-20 for an international conference that will tackle science, technology, and education.

Organized by the American Association for the Advancement of Science (AAAS), an international non-profit organization dedicated to advancing science around the world, the conference's theme of "Flattening the World: Building the Global Knowledge Society" is intended to focus the program on the complex, interconnected challenges of the 21st century and on pathways to global solutions through international, multidisciplinary efforts.

"The world's best scientific brains will be coming to Vancouver next month to present their latest discoveries and breakthroughs on everything from climate change impacts on the Arctic to breakthroughs in digital media,"

said Dr. Alan Leshner, chief executive officer of the AAAS. "This is the first time in more than 30 years that the AAAS Annual Meeting has been held outside the United States, and Canada – as a global science, research, and innovation leader – was a very easy choice."

B.C. researchers will lead more than two dozen of the nearly 170 symposiums. Dr. Julio Montaner, director of the BC-CfE, will lead two symposiums on Sunday, February 19, on the topic of Treatment as Prevention, which was recently named the top scientific breakthrough of 2011 by the AAAS-published *Science* magazine.

Dr. Montaner will also appear on a panel that will include Dr. Nora Volkow, director of the National Institute on Drug Abuse (NIDA), and Dr. Evan Wood, co-director of the Urban Health Research Institute (UHRI) at BC-CfE. They will discuss the current understanding of the optimal combined management of addiction and HIV infection as a means to curb HIV/AIDS morbidity and mortality as well as HIV transmission.

"We are extremely fortunate to have the AAAS conference in Vancouver and world-class scientists such as Dr. Volkow presenting and participating," said Dr. Montaner. "There is a clear need for evidence-based thinking and evidence-based policy in all aspects of our civil society. Hopefully, the AAAS conference will inspire the Canadian people and all levels of the political process to ensure science and research form the basis of future health policies across the country."

Dr. Volkow's presence in Vancouver for the AAAS conference was the impetus for a special session of BC-CfE's HIV/Antiretroviral Update on Monday, February 20.

To register for the AAAS conference in Vancouver, please visit: www.aaas.org/meetings/2012/registration/. To register for BC-CfE's HIV/Antiretroviral Update, please visit: www.cfenet.ubc.ca/events/hivantiretroviral-update-special-session-hivarv.

PROFILE

Task force combats HIV/AIDS in B.C.'s Aboriginal communities

The figures are startling, and represent an immediate call to action. While Aboriginal people make up about five per cent of the total population in British Columbia, they represented more than 13 per cent of all new HIV infections in the province in 2010. In addition, B.C. is home to Canada's second-largest Aboriginal population, with many Aboriginal people residing in the province's remote northern region.

It's statistics like these that provided the impetus for the establishment of the Northern B.C. Aboriginal Task Force, which has been mandated by the chiefs of 60 communities in northern B.C. to advocate and work with the members that are infected and affected by HIV/AIDS. It's composed of Aboriginal community leaders; elders; youth; people living with HIV/AIDS; local, regional, provincial and federal government representatives; health service professionals; and the RCMP.

Led by director Emma Palmantier, the task force has conducted a community engagement survey of 53 First Nations communities throughout northern B.C. over the past two years. "The communities recommended that we engage Chief and Council to learn about HIV and AIDS and better understand their role in combating this issue in their own communities," said Palmantier.

The study, known as The Cedar Project, showed that HIV/AIDS is a major and growing concern for Aboriginal communities in northern B.C., and highlighted the urgent need for action in these communities.

"Chiefs, councillors, and hereditary chiefs need to speak publicly about HIV and AIDS, so the community members hear the leaders talking about these issues and begin to take it seriously," said Palmantier.



Emma Palmantier

budget for HIV initiatives, an amount insufficient to provide awareness, prevention, and education to their people. The study also showed a desire for more youth leadership, as well as more palliative care and treatment for people suffering from AIDS.

"Many chiefs are concerned about serious health issues such as the high rate of teen pregnancies, risky behaviours like drug and alcohol use among youth, and the high numbers of community members with HIV/AIDS," said Palmantier.

Palmantier brings a wealth of experience to the task force, particularly in northern health issues and Aboriginal politics. Her experience includes positions as vice-chief of the Carrier Sekani Tribal Council, chief of the Lake Babine Nation, general manager of Cheslatta Carrier Nation, and general manager of Lake Babine Nation.

One of the common challenges identified by the communities was a lack of sufficient funding to provide services and programs to First Nations communities. Palmantier cited one community in northern B.C. that stated they receive a \$69.00 annual

HAARTbeats

Early treatment better than delayed for recently infected HIV patients

A new study published in the *Journal of Infectious Diseases* has found that among study participants who were recently infected with HIV, immediate administration of antiretroviral therapy (ART) was preferable to deferring treatment.

The AIDS Clinical Trials Group (ACTG) Setpoint Study enrolled 130 men and non-pregnant women who were at least 18 years old and had not received ART previously. Participants were randomly divided into two groups. In the immediate treatment group, patients received ART for 36 weeks, after which treatment was stopped. In the second group, treatment was deferred. All individuals were followed throughout the study.

The study's primary endpoint was the patients' virologic setpoint (i.e. the amount of HIV in the blood in the absence of ART) at 72 weeks. Individuals in the deferred arm experienced higher than anticipated rates of disease progression, necessitating the start of HIV treatment before the end of the study. Half of the participants in the deferred treatment group required treatment on medical grounds within 18 months. In contrast, participants who received treatment immediately appeared to have been protected not only during treatment, but also for a brief period of time after treatment was stopped. Researchers also noted that the benefits of immediate treatment appear to have been achieved with little to no harm to the patients in terms of drug-related toxicity or emergence of drug resistance.

Dr. Christine Hogan, MD of the Medical College of Wisconsin, led a team of researchers from various institutions to conduct this study. In the news release issued by the Infectious Diseases Society of America, Dr. Hogan said that the study results suggest that "if immediate therapy is not begun, progression to meeting standard criteria for ART initiation may occur more rapidly than expected, especially with changing treatment paradigms."

These findings support growing evidence favouring early ART initiation for recently infected patients, and may prove useful for clinicians and patients struggling to determine when to begin HIV treatment.

FOREFRONT LECTURE SERIES

Date: Wednesday, Feb. 8, noon to 1 p.m.

Location: Hurlburt Auditorium, St. Paul's Hospital

Speaker: Dr. Tomer Hertz, staff scientist, Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, Washington

Lecture: *Mapping the landscape of host-pathogen co-evolution through the prism of HLA class I-peptide interactions*

Contact: Cameron Collins at 604-682-2344 ext. 66357 or ccollins@cfenet.ubc.ca

A light lunch and refreshments will be served.

BC Centre for Excellence in HIV/AIDS

- > Improve the health of British Columbians with HIV through comprehensive research and treatment programs;
- > Develop cost-effective research and therapeutic protocols;
- > Provide educational support programs to health-care professionals;
- > Monitor the impact of HIV/AIDS on B.C. and conduct analyses of the effectiveness of HIV-related programs.

Physician Drug Hotline
1.800.665.7677

St. Paul's Hospital Pharmacy Hotline
1.888.511.6222

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