

BC-CfE Researchers Running Key International Research Programs

Two international programs led by Dr. Thomas Kerr and Dr. David Moore are continuing to enhance the global reputation of the BC Centre for Excellence in HIV/AIDS (BC-CfE) for innovative research. These programs provide new information that will help fight the HIV/AIDS pandemic.

For the past 17 years, BC-CfE's multidisciplinary team of researchers has led several leading-edge international projects in countries such as Argentina, South Africa and Thailand.

"I am truly humbled by the commitment BC-CfE researchers have shown towards identifying and understanding the many factors that affect the health of vulnerable populations around the world," said Dr. Julio Montaner, director of the BC-CfE.

Study reveals Thailand's 'war on drugs' is a failure

Alarmed by the growing drug use, especially among youth, and worried about the negative impact it could have on the future of the children in Thailand, then Thai Prime Minister Thaksin Shinawatra launched the Thai 'war on drugs' in 2003.

Although in theory the war on drugs emphasized treating drug users as 'patients' rather than criminals, in practice it focused on arresting and incarcerating suspected drug users and dealers. This resulted in extra-judicial killings of over 2,200 alleged drug dealers.

In 2008, when Thailand revived its aggressive drug war policy of 2003, a research team led by Dr. Thomas Kerr started a research project titled the 'Mitsampan Community Research Project' in Thailand. The project employed a community-based

approach, with the peer-run (run by Thai injection drug users (IDUs)) Mitsampan Harm Reduction Centre (MSHRC) contributing a 15-member team of peer researchers. The Thai AIDS Treatment Action Group (TTAG) and the Chulalongkorn University also collaborated on this project.

The team surveyed more than 250 local IDUs between June and September 2008. This project is one of the first to demonstrate how Thailand's war-on-drugs policy has affected the health and well-being of Thai IDUs. The following key findings raise serious questions about the merits of the government's current policy:

- While slightly over half the study participants reported observing an increase in police presence, the study found no evidence that these individuals had significantly different drug use behaviours compared to other study participants.
- Forty-eight per cent of participants reported having drugs planted on them by police.
- Seventy-eight per cent of participants had been incarcerated at some point in the past and eighty-one per cent of those individuals who were incarcerated reported syringe sharing while in prison.

"Our findings suggested negative consequences of the Thai war-on-drugs policy, including human rights violations and adverse health impacts," said Dr. Kerr. "The findings reinforce what we have always suspected – that a policy solely based on drug law enforcement will not reduce, but perpetuate more ills related to drug addiction."



Dr. Thomas Kerr (front row, extreme left) with Michel Kazatchkine (second row, second from right), executive director of the Global Fund and other members of the research team at MSHRC.



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While the study revealed the failure of the Thai war on drugs policy, it found that the peer-run MSHRC's efforts to expand its harm reduction programs to reach a larger number of Thai IDUs has been successful. Thirty per cent of the study participants reported that they had used the resources provided at the MSHRC, especially access to sterile syringes.

Couples with one HIV-infected partner studied

In June 2009, enrolment began in the Highly Active Antiretroviral Therapy as Prevention (HAARP) study, a three-year observational study funded by the Canadian Institutes of Health Research (CIHR) to examine the effectiveness of antiretroviral therapy (ART) in preventing HIV transmission among serodiscordant couples in Uganda.

Serodiscordant is a term used to describe a couple in which one partner is HIV positive and the other is HIV negative.

Dr. David Moore, principal researcher on the project, said that this study will be among the first to directly measure the impact of ART over and above that of providing counselling and condoms. Results of the study are expected by the end of 2011.

"If the study shows that ART is successful in dramatically reducing the rates of HIV transmission within serodiscordant couples, individuals involved in such relationships potentially could be targeted for treatment at higher CD4 cell counts," said Dr. Moore. "A similar approach has already been adopted to treat HIV-positive pregnant women in many countries in sub-Saharan Africa in order

to maximize the effects of the medications in terms of reducing maternal mortality and mother-to-child transmission of HIV."

A CD4 cell count is one of the most useful indicators of the health of the immune system. Doctors consider a normal count in a healthy, HIV-negative adult to be anywhere between 600 and 1,200 CD4 cells/ μ L of blood. Currently, HIV-infected individuals in Uganda are considered to be eligible for ART if their CD4 count is less than or equal to 250 cells/ μ L. However, pregnant women may be considered eligible for ART if their CD4 counts are less than or equal to 350 cells/ μ L.

HAARP is a collaboration between the BC-CfE, The AIDS Support Organization (TASO), and the Medical Research Council (U.K.) AIDS Research Unit in Uganda.



BC-CfE researchers visited the Bumanya village in Uganda as part of their TASO outreach for HIV monitoring, HAART initiation and dispensing.



Dr. Julio Montaner

Dr. Julio Montaner Elected to the Fellowship of the Royal Society of Canada

The Life Sciences Division of the Academy of Science of the Royal Society of Canada (RSC) recently elected Dr. Julio Montaner to the prestigious Fellowship of the RSC. Every year, the RSC confers this honour on distinguished scholars and artists who are selected on the basis of their exceptional contributions to Canadian intellectual culture.

"We are pleased to confer this Fellowship on Dr. Julio Montaner, whose innovative work in the field of HIV/AIDS research and treatment has been nothing short of remarkable," said Yvan Guindon, president of the RSC. "With this Fellowship, we are recognizing Dr. Montaner's highly successful career, his many accomplishments in the

fight against HIV/AIDS, and his exemplary leadership of the BC Centre for Excellence in HIV/AIDS."

The RSC has evolved from a largely honorific society into a dynamic organization that requires leadership and active engagement from its Fellows. Besides reflecting Dr. Montaner's accomplishments so far, this honour also endows upon him the responsibility to shape the future of the RSC.

"I truly appreciate this recognition from my peers, and will work with the RSC and its elected Fellows to advance the cause of scholarship and science in Canada," said Dr. Montaner. "I have the highest regard for the Fellowship of the RSC and I consider this a landmark in my career to be part of such esteemed company."



Social influences upon injection initiation among street-involved youth in Vancouver

Will Small, Danya Fast, Andrea Krusi, Evan Wood, Thomas Kerr

In order to inform epidemiological research and prevention efforts, these BC-CfE researchers conducted a qualitative study to investigate the initiation of injection drug use among street-involved youth in Vancouver.

Interviewees were recruited from the At-Risk Youth Study (ARYS), a cohort of street-involved youth who use illicit drugs in Vancouver. Twenty-six youth aged 16 to 26 participated in this study, including 12 females.

Among study participants, the first injection episode frequently featured another drug user who facilitated the initiation of injecting. Narratives from study participants indicate that the transition into injecting is influenced by social interactions with drug-using peers and evolving perceptions of injecting. Refusing to identify as an injection drug user was important for youth who had stopped injecting. It appears that social conventions discouraging initiation of young drug users into injection drug use exist among established injection drug users, although this ethic is often ignored.

This study highlights the importance of social relationships within the transition towards injection drug use among street youth, and the potential of social interventions to prevent injection initiation. (*Substance Abuse Treatment, Prevention, and Policy*)

Health care services utilization stratified by virological and immunological markers of HIV

Eric Druyts, Benita Yip, Viviane Lima, Tom Burke, Dragan Lesovski, Kimberley Fernandes, Colin McInnes, Claire Rustad, Julio Montaner, Robert Hogg

The aim of this study was to determine rates of utilization of in-patient, out-patient and laboratory services stratified by virological and immunological markers of HIV disease among patients on ART in B.C.

Resource utilization was measured for in-patient visits, out-patient visits, and laboratory tests among patients initiating ART between April 1, 1994 and December 31, 2000, with follow up to March 31, 2001. Resource use was stratified by CD4 cell count and plasma HIV viral load (pVL) at the time of utilization. Rates per 100 patient-years were calculated for each health care resource.

A total of 2,718 patients were included in the analyses. The overall rates of in-patient visits, out-patient visits, and laboratory tests were 902, 3001, and 840 per 100 patient-years, respectively. Utilization was higher for patients with low CD4 cell counts and high pVLs when compared with patients with high CD4 cell counts and low pVLs. (*HIV Medicine*)

Impact of food insecurity on treatment outcomes

Sheri Weiser, Edward Frongillo, Kathleen Ragland, Robert Hogg, Elise Riley, David Bangsberg, Aranka Anema

There is growing international concern that food insecurity may negatively impact antiretroviral (ARV) treatment outcomes, but no studies have directly evaluated the effect of food insecurity on viral load suppression and antiretroviral adherence.

This study followed 104 participants who were homeless and marginally housed HIV-positive patients. They were being treated with ARVs and receiving adherence monitoring with unannounced pill counts in the Research on Access to Care in the Homeless (REACH) Cohort.

Food insecurity was measured by the Household Food Insecurity

Access Scale (HFAS). Researchers used multivariate logistic regression to assess whether food insecurity was associated with viral suppression.

The study found that among the 104 participants, 51% were food secure, 24% were mildly or moderately food insecure and 25% were severely food insecure. Severely food insecure participants were less likely to have adherence $\geq 80\%$. In adjusted analyses, severe food insecurity was associated with a 77% lower probability of viral suppression (95% Confidence Interval (CI) = 0.06–0.82) when controlling for all covariates. In analyses stratified by adherence level, severe food insecurity was associated with an 85% lower probability of viral suppression (95% CI = 0.02–0.99) among those with $\leq 80\%$ adherence and a 66% lower probability among those with $>80\%$ adherence (95% CI = 0.06–1.81).

Researchers concluded that food insecurity is present in half of the HIV-positive urban poor in San Francisco. The findings also suggest that ensuring access to food should be an integral component of public health HIV programs serving impoverished populations. (*Journal of General Internal Medicine*)

IAS Welcomes New Executive Director Robin Gorna



Robin Gorna

While still a student at the University of Oxford in the mid-1980s, Robin Gorna lost her close friend – a gay man – in a car crash. This was the time when the HIV epidemic in U.K.

had started and prejudice was still high. After her friend's death, Ms. Gorna went to see *The Normal Heart*, Larry Kramer's political play about AIDS, and around this time the Terrence Higgins Trust was seeking volunteers. Moved by her friend's tragedy, the play's message and inspired by her parents' commitment to social justice, Ms. Gorna signed up as a volunteer.

"That moment connected all of the issues that mattered to me – social justice and homophobia with the outbreak of HIV," she recently told *The Lancet* in an interview.

Gorna, a 20-year veteran in the field of HIV/AIDS with extensive senior executive experience, has succeeded Craig McClure as the new executive director of the International AIDS Society (IAS), the world's leading independent association of HIV professionals with over 13,000 members representing 188 countries.

In her role as executive director, Ms. Gorna will be head of the IAS secretariat based in Geneva, Switzerland. She will be responsible for the day-to-day management of the organization and implementation of the organization's strategic and operational plans.

"We are delighted to find a candidate of Robin's calibre and experience for this position," said Dr. Montaner, IAS president and director of the BC-CfE. "Robin has worked in all corners of the globe addressing many diverse issues within healthcare generally and regarding HIV

specifically. She is an innovative and respected leader, and I have no doubt she will make a significant contribution to the IAS and the global fight against HIV/AIDS."

Commenting on her new role with the IAS, Ms. Gorna said, "my overall vision for the IAS is to play a part in supporting and mobilizing global efforts to bring an end to the HIV/AIDS epidemic."

Although happy with the recent progress made in the fight against HIV/AIDS, she is also aware of the inefficiencies and challenges that hinder progress. "One of the biggest challenges we face is AIDS fatigue," said Ms. Gorna, explaining that in the third decade of the epidemic, it is hard to keep the energy and commitment of governments, donors and policy makers on HIV/AIDS.

Ms. Gorna also warned that the current competition between strengthening of health systems versus strengthening the response to HIV/AIDS is a false debate. "There are some who say that we must shift focus away from AIDS to other health concerns – yet we have growing evidence that when HIV programs are rolled out effectively, overall maternal and child mortality rates drop and tuberculosis and malaria rates fall. So one of the big challenges we face is to make sure that even in these fiscally challenging times, we make the case – the economic and humanitarian case – for maintaining the momentum to scale up effective, comprehensive AIDS programs where they are needed," she said.

Prior to her appointment as executive director of the IAS, Ms. Gorna was based in South Africa as the senior regional health and AIDS adviser for the U.K. government's Department for International Development (DFID). In this role, she led many policy processes, including securing a key international agreement to "universal access," first at the G8 in Gleneagles and then through the United Nations.

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.

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608 – 1081 Burrard St.
Vancouver, B.C. V6Z 1Y6
Tel: 604.806.8477
Fax: 604.806.9044

Physician Drug Hotline

1.800.665.7677

St. Paul's Hospital

Pharmacy Hotline
1.888.511.6222

Website

www.cfenet.ubc.ca

E-mail

info@cfenet.ubc.ca

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