



Left to right: Dr. M-J Milloy, Research Scientist, BC-CfE; Justin Dhaliwal, CEO, National Green Biomed; Arvind Gupta, President and Vice Chancellor of UBC; Herb Dhaliwal, Chairman, National Green Biomed & Former MP; Claudette Cardinal, Patient Advocate; David Sidoo, Private Investment Banker and Member, UBC Board of Governors; Dr. Julio Montaner, Director, BC-CfE.
Photo credit: Martin Dee, UBC Faculty of Medicine

Medical marijuana: Daily cannabis use may lower HIV viral loads

Daily cannabis use may lower HIV viral loads, suggest remarkable findings from a relatively new field of research

A researcher in the BC Centre for Excellence in HIV/AIDS (BC-CfE)'s Urban Health Research Initiative, Dr. M-J Milloy, will lead a clinical study on the possible therapeutic benefits of cannabis in the treatment of HIV/AIDS. His independent research into HIV and cannabis is supported by a \$1-million gift to the University of British Columbia Faculty of Medicine by National Green Biomed Ltd.

The clinical study follows previous research led by Dr. Milloy which identified an association between marijuana use and lower viral loads (the amount of virus in a person's blood) among patients living with HIV. The BC-CfE study *High-intensity cannabis use associated with lower plasma human immunodeficiency virus-1 RNA viral load among recently infected people who use injection drugs* was published in *Drug and Alcohol Review* in March 2015 and included interviews from 88 individuals in the year following acquisition of the virus participating in the National Institutes of Health-funded study *AIDS Care Cohort to evaluate Exposure to Survival Services (ACCESS)*.

Among the 88 individuals, researchers observed significantly lower viral loads that were independently

associated with people reporting at least daily cannabis use in the first year following HIV infection. The results support further investigation of the possible virological and immunological aspects of cannabinoid exposure among HIV-infected people.

High levels of cannabis use are often reported by HIV-positive people attempting to ease the side effects of triple-drug therapy regimens, as well as recreationally. However, the scientific evidence-base for cannabinoids is limited, and their effect on HIV disease parameters such as viral load is largely unknown.

A similar study was conducted by researchers at Louisiana State University involving chronic exposure to Tetrahydrocannabinol (THC)—the active chemical in cannabis—among rhesus macaques infected with HIV. The monkeys exposed to THC showed lower viral loads, greater retention of body mass, reduced inflammation and lengthened survival compared with those exposed to placebo. It should be noted caution is required when inferring similarities between data generated in primates and human participants.

The current findings from the BC-CfE study will be evaluated in light of a growing body of evidence generated from pre-clinical settings on the structure and function of the body's cannabinoid receptor system and its possible role in HIV disease.

How does marijuana affect HIV? Cannabinoids, including THC, bind to receptors expressed by cells in the nervous and immune systems. This has been shown to have beneficial immune-suppressive and anti-inflammatory properties and possibly bring down the replication of virus in the bloodstream. One experiment showed a synthetic cannabinoid receptor agonist suppressed replication of HIV in microglia, the major cell type productively infected in the human nervous system.

We have long heard from our patients that they perceive health benefits from cannabis use," said Dr. Julio Montaner, BC-CfE director and head of the UBC Division of AIDS. "This gift will allow us to begin to rigorously assess whether these benefits are truly real."



» Canadian attitudes on the issue of marijuana's legality and availability are still very much in flux. But if marijuana can help reduce pain or nausea, or even treat disease, we have a duty to find out."

— Arvind Gupta, UBC's President and Vice Chancellor (Photo credit: Martin Dee, UBC)



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PROFILE

Dr. Rolando Barrios

Medical Director, BC Centre for Excellence in HIV/AIDS Senior Medical Director, Vancouver Coastal Health

» A sincere desire to make a difference in people's lives and the health-care systems that serve them, has defined and given purpose to Dr. Rolando Barrios' work today. Since moving to Canada from his native Guatemala with his wife and two children in 1991, he has embraced what he refers to as the Canadian way of "always lending a helping hand."

The HIV Continuum of Care Collaborative and HIV Quality Improvement Network is one such initiative that Dr. Barrios is proud to have spearheaded. As the Medical Director, he explains the development of a new model of care was the driving force behind the 15-month project. In an effort to improve care, reduce unnecessary service utilization and control spiraling costs, the chronic disease model of management is increasingly being applied to chronic diseases and health conditions such as diabetes, high blood pressure, HIV/AIDS, etc., to improve patient care on a system-wide level. The Collaborative brings together a diverse group of health-care leaders from across B.C. to share and learn from each other to close gaps across the Continuum of HIV Care. Once the initial 15 months concludes, all participants will be invited to join the HIV Quality Improvement Network to sustain performance gains and continue exchanging ideas and best practices.

Years of dedicated work and perseverance, supported by a loving family, have enabled Dr. Barrios to achieve many of his professional and personal goals. The second youngest of five boys, he fondly remembers working throughout his youth in his father's textile factory; a man he describes as a "smart guy and a good businessman" despite a lack of formal education. In fact, he credits many of his present management skills to this early work experience. Within the Barrios household, his mother did not let gender stereotypes get in the way of teaching the boys to be fully self-sufficient which included performing all of the household duties. Today, one cannot help but notice his gentle demeanor coupled with a piercing focus and clearly articulated solutions, all of which have invited the respect of colleagues and patients alike.

Upon arriving in Canada, Dr. Barrios first worked as a youth supervisor for the Boys and Girls Club followed by a stint on the downtown east side as an outreach worker with HIV/AIDS programs for new immigrants. He completed specialty training in Family and Community Medicine at the University of Calgary, Alberta, and was



granted a fellowship in Community Medicine by the Royal College of Physicians of Canada in 2002. Returning to Vancouver, Dr. Barrios co-lead the Urban Primary Care redesign for Vancouver Community (Vancouver Coastal Health). In 2003, he successfully led the HIV care re-design at the John Ruedy Immunodeficiency Clinic (IDC) and later joined the BC Centre for Excellence in HIV/AIDS in 2005. His academic knowledge coupled with his personal experience as an immigrant have enabled him to bring a unique sensibility and empathy towards his patients and others new to the system. Opened since 1994, Dr. Barrios is also a co-founder of the Bridge Community Health Clinic that provides immediate access to primary and preventive health services for refugees with or without legal status.

Irene Day, Director of Operations at the BC-CfE added, "I have worked with Dr. Barrios for over 10 years and of significant importance to me is his ability to use a quality improvement model to drill down to the root of process issues. He's absolutely professional to work with and I admire his skill and expertise."

IAS 2015



IAS 2015
vancouver, canada
8th IAS Conference on HIV Pathogenesis,
Treatment & Prevention 19-22 July 2015

» The countdown is on for the 8th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2015). This July 19-22, Vancouver will welcome over 7,000 of the world's leading scientists, clinicians, public health experts and community leaders in HIV. As the world's largest open scientific conference on HIV-related research, IAS 2015

will provide an unparalleled opportunity for conference participants to meet and examine the latest scientific developments, and explore how such developments can be realistically implemented around the world.

Registration will remain open up until the beginning of the conference. For more information and to register, please visit: www.ias2015.org

In addition to the IAS 2015 conference program, there will be several affiliated independent events taking place throughout the city. For more information, please visit: bit.ly/AffiliatedIndependentEvents

EDUCATION

BC-CfE Webinar Series

» The first BC-CfE Webinar Learning Series was launched in May 2013 with *Cascade of Care in HIV* as the topic. The Webinars are collaborative efforts between the Clinical Education Program at the BC-CfE and Positive Living Society of BC. These one-hour, live sessions take place every three to four months and feature a panel of health-care professionals and people living with HIV who speak on various subjects related to HIV care. The topics included linkage to care, HIV care in women, antiretroviral treatment and its access in B.C., and Treatment as Prevention. The Webinars combine clinical and psychosocial content, practical strategies, and interaction between the audience and the speakers.

These sessions draw audiences from across B.C. and Canada, from diverse health and service professions, and from communities affected by HIV. Over 90 participants attended the latest Webinar on June 3, 2015, which examined addictions and mental health challenges in providing HIV care.



For more information about the Webinars, contact Helen Kang, Clinical Educator, at hkang@cfenet.ubc.ca.

AWARDS

Lianping Ti receives IHSPR Rising Star Award

Lianping Ti, PhD candidate at the University of British Columbia and Research Associate with BC-CfE's Urban Health Research Initiative (UHRI), recently received one of two 2014-2015 IHSPR Rising Star Awards in recognition of her article *Denial of pain medication by health care providers predicts in-hospital illicit drug use among individuals who use illicit drugs* by the CIHR Institute of Health Services and Policy Research (IHSPR).



Dr. Thomas Kerr, UHRI co-director shared, "Mint is a remarkably accomplished and skilled young researcher who is already making an impact with her work."

The IHSPR Rising Star Award is intended to recognize excellence in Canadian knowledge translation and/or research carried out by graduate students and post-doctoral fellows in all fields and disciplines related to health services and policy research. With this award, IHSPR recognizes the excellence and potential impact of Lianping's article and its contribution to advancing the field of health services and policy research.

The BC-CfE congratulates Lianping on this amazing achievement and wishes her continued success.

LECTURES & EVENTS

What's New in Addiction Medicine?

Substance Use Disorders and Health Professionals

Speaker: Dr. Paul Farnan

Tuesday, June 30, 2015, 12:00-1:00PM

Hurlburt Auditorium (2nd Floor), St. Paul's Hospital

Alcohol Policy

Speaker: Dr. Tim Stockwell, Director, Centre for Addictions Research of BC

Tuesday, July 28, 2015, 12:00-1:00PM

Hurlburt Auditorium (2nd Floor), St. Paul's Hospital

Overdose Prevention and Harm Reduction

Speaker: Dr. Jane Buxton, Physician Epidemiologist & Harm Reduction Lead at the BC Centre for Disease Control

Tuesday, August 25, 2015, 12:00-1:00PM

Hurlburt Auditorium (2nd Floor), St. Paul's Hospital

For more information, contact us at Education@cfenet.ubc.ca or visit our website at www.education.cfenet.ubc.ca

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

Website
www.cfenet.ubc.ca

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