



THE UNIVERSITY OF
BRITISH COLUMBIA

UBC Public Affairs

310 – 6251 Cecil Green Park Rd.
Vancouver B.C. Canada V6T 1Z1

www.publicaffairs.ubc.ca

Tel: 604.822.3131
Fax: 604.822.2684
E-mail: public.affairs@ubc.ca

UBC News Line:
604.UBC.NEWS (822.6397)



Contact:
Brian Lin
UBC Public Affairs
Tel. 604.822.2234
Cell. 604.818.5685
Email: brian.lin@ubc.ca

mr-08-083

MEDIA RELEASE | JULY 13, 2009

Early-life experience linked to chronic diseases later in life: UBC research

People's early-life experience sticks with them into adulthood and may render them more susceptible to many of the chronic diseases of aging, according to a new UBC study.

A team led by UBC researchers Gregory Miller and Michael Kobor performed genome-wide profiling in 103 healthy adults aged 25-40 years.

Those who participated in the study were either low or high in early-life socioeconomic circumstances related to income, education and occupation during the first five years of life. But the two groups were similar in socioeconomic status (SES) at the time the genome assessment was performed and also had similar lifestyle practices like smoking and drinking habits.

Their study, to be published in this week's *Proceedings of the National Academy of Sciences*, shows that among subjects with low early-life socioeconomic circumstances, there was evidence that genes involved with inflammation were selectively "switched-on" at some point. Researchers believe this is because the cells of low-SES individuals were not effectively responding to a hormone called cortisol that usually controls inflammation.

"We've identified some 'biologic residue' of people's early-life experience that sticks with them into adulthood," says Miller, an associate professor in the Department of Psychology and a member of the Brain Research Centre at UBC Hospital.

"The study suggests that experiences get under the skin," says Kobor, an assistant professor in the UBC Department of Medical Genetics and a scientist at the Centre for Molecular Medicine and Therapeutics at the Child & Family Research Institute.

This pattern of responses might contribute to the higher rates of infectious, respiratory, and cardiovascular diseases as well as some forms of cancer among people who grow up in low-SES households, according to the interdisciplinary research team that also includes scientists from the University of California, Los Angeles.

"It seems to be the case that if people are raised in a low socioeconomic family, their immune cells are constantly vigilant for threats from the environment," says Miller. "This is likely to have consequences for their risk for late-life chronic diseases."



THE UNIVERSITY OF
BRITISH COLUMBIA

UBC Public Affairs

310 – 6251 Cecil Green Park Rd.
Vancouver B.C. Canada V6T 1Z1

www.publicaffairs.ubc.ca

Tel: 604.822.3131
Fax: 604.822.2684
E-mail: public.affairs@ubc.ca

UBC News Line:
604.UBC.NEWS (822.6397)



Contact:
Brian Lin
UBC Public Affairs
Tel. 604.822.2234
Cell. 604.818.5685
Email: brian.lin@ubc.ca

mr-08-083

The Brain Research Centre comprises more than 200 investigators with multidisciplinary expertise in neuroscience research ranging from the test tube, to the bedside, to industrial spin-offs. The centre is a partnership of UBC and VCHRI. For more information, visit www.brain.ubc.ca.

The Centre for Molecular Medicine and Therapeutics is a synergistic group of scientists and researchers who share a strong sense of commitment to solve the many genetic questions surrounding human illness and well being. Affiliated with the University of British Columbia and the Child & Family Research Institute, CMMT conducts discovery research and translates that research into effective clinical and therapeutic strategies to promote health. For more information, visit www.cmmt.ubc.ca.

The Child & Family Research Institute conducts discovery research, clinical investigation, and applied health research to benefit the health of children and families. It is the largest research institute of its kind in Western Canada. CFRI works in close partnership with BC Children’s Hospital and Sunny Hill Health Centre for Children, and BC Women’s Hospital & Health Centre, agencies of the Provincial Health Services Authority; BC Children’s Hospital Foundation; UBC and Simon Fraser University. For more information, visit www.cfri.ca.

VCH Research Institute is the research body of Vancouver Coastal Health Authority. In academic partnership with UBC, the institute advances health research and innovation across B.C., Canada, and beyond. www.vchri.ca