



NEWS RELEASE

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National study launched to discover the causes of asthma and allergy

Study aims to recruit 5000 pregnant women in Canada and 1500 in Vancouver

(Vancouver – June 6, 2008) – A new, multi-million dollar national study will recruit 5000 pregnant Canadian women and follow their children as they grow up in an effort to understand why there's an asthma and allergy epidemic among children. Together, asthma and allergy affect one in three Canadian children and are a major reason for visits to an emergency department. In Vancouver, researchers are seeking 1500 pregnant women to participate in the study.

"We want to know how genes and environment interact to cause asthma and allergy," says Dr. Stuart Turvey, clinician scientist at the Child & Family Research Institute, pediatric immunologist and rheumatologist at BC Children's Hospital, and assistant professor in the Division of Infectious and Immunological diseases in the Department of Pediatrics at the University of British Columbia. Dr. Turvey is leading the Vancouver portion of the study that is led nationally by Dr. Malcolm Sears of McMaster University and St. Joseph's Healthcare in Hamilton, Ontario. Additional sites include Edmonton, Winnipeg, and Toronto.

"Asthma, food allergies, eczema, and hay fever share a common biology," says Dr. Turvey. "It's one disease that affects different organ systems. If we know more about the causes, then we can figure out the right interventions to protect the kids."

The researchers will analyze the children's blood and DNA samples to understand which genetic factors may predispose them to asthma and allergy. They'll track the children's health history and compare samples of their immune cells from their umbilical cord blood at birth with blood samples taken at three and five years of age. They'll collect the babies' first urine and fecal samples and study the intestinal bacteria, which may provide important clues. They'll look at materials used to construct the family home and dust samples from the babies' first beds, interview mothers about diet and stress levels, examine neighbourhood traffic patterns and use GPS to do pollution mapping.

"Many of the factors that set you up to have asthma appear to happen before you're one year old," says Dr. Turvey. "It's only through a long-term study like this one, where we follow the kids from pregnancy, that we'll be able to answer fundamental questions about genes and the environment. This study will generate a comprehensive, long-term understanding about the average child born in Canada."

In the Vancouver area, BC Women's Hospital & Health Centre is recruiting study participants and pregnant women can join the study by phoning 604-875-2345, ext. 5370. Their children will be followed at BC Children's Hospital. Both hospitals are agencies of the Provincial Health Services Authority.

Allergies occur when the immune system overreacts to triggers such as dust, pollen, insect stings, or certain foods such as peanuts or shellfish. Symptoms typically include sneezing, coughing, itching, and in some cases, asthma. Some allergic reactions can be very dangerous leading to life-threatening anaphylaxis. Asthma symptoms include shortness of breath, tightness in the chest, coughing, and wheezing. It's one of the major reasons why children visit an emergency department: it can be life threatening and lead to respiratory arrest. There's no cure and various medications are used to treat symptoms. In Canada, the number of children affected by asthma has increased over the past decades and approximately 15 per cent were diagnosed with asthma in 2000/2001. This rate varies regionally across the country.

The project is called the Canadian Healthy Infant Longitudinal Development (CHILD) study and it's funded by AllerGen NCE Inc. (the Allergy, Genes and Environment Network) and the Canadian Institutes of Health Research (CIHR), which are investing \$6 million each over six years. The study is also supported by Canada Mortgage and Housing Corporation, the Childhood Asthma Foundation, Health Canada and Environment Canada. More information is available at www.canadianchildstudy.ca.

The Michael Smith Foundation for Health Research supports Dr. Turvey and the research team in British Columbia. Dr. Turvey is also supported by the Child & Family Research Institute and BC Children's Hospital Foundation. The Vancouver research team includes the University of British Columbia; the James Hogg iCAPTURE Centre for Cardiovascular and Pulmonary Research at St. Paul's Hospital; and Simon Fraser University.

BC Women's Hospital & Health Centre, an agency of the Provincial Health Services Authority, provides services for pregnant women, newborns and women with specialized health needs from across the province. BC Women's is an academic health centre affiliated with the University of British Columbia, Simon Fraser University, and the Women's Health Research Institute. For more information, visit www.bcwomens.ca.

BC Children's Hospital, an agency of the Provincial Health Services Authority, provides expert care for the province's most seriously ill or injured children, including newborns and adolescents. BC Children's is an academic health centre affiliated with the University of British Columbia, Simon Fraser University, and the Child & Family Research Institute. For more information, visit www.bcchildrens.ca.

The Child & Family Research Institute (CFRI) 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, BC Women's Hospital & Health Centre, and BC Mental Health & Addiction Services, agencies of the Provincial Health Services Authority; BC Children's Hospital Foundation; the University of British Columbia and Simon Fraser University. For more information, visit www.cfri.ca.

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