

\$1.8 MILLION GRANT FROM THE CIHR

New data will lead to a better understanding of the impact of prenatal stress on mothers-to-be and their fetuses

MONTREAL, January 26 – A researcher at the Douglas Mental Health University Institute has received \$1.8 million to pursue her work on the effect of prenatal maternal stress (PNMS) on the development of the fetus. This is one of the largest grants that the Canadian Institutes of Health Research (CIHR) awarded in 2011. Thanks to this CIHR funding, Suzanne King, PhD, will examine the impact of stress experienced by pregnant women during the January 2011 floods in Australia, and the consequences of this stress on children born that year. This new research is a continuation of Project Ice Storm that Suzanne King began 14 years ago.

A unique opportunity for PNMS research

“This study is the first of its kind,” stated Suzanne King. “Thanks to our colleague in Australia, Sue Kildea, PhD, we have access to samples of placentas, umbilical cords and blood from births that occurred during a natural disaster. No one has ever had access to this kind of biometric data. We now need to analyze this information to understand the mechanisms through which PNMS can affect fetuses. This major grant is essential to the advancement of our research, as the process we are embarking upon will be long and require a huge investment.”

Sue Kildae oversees more than 400 midwives at the Mater Hospital in Brisbane, which was at the epicentre of the Australian floods. Her team was already following about one hundred pregnant women in a study on prenatal care when the 2011 catastrophe hit. She recruited 200 more mothers for QF2011 as the disaster was unfolding. Another collaborator of Suzanne King's is American researcher Michael O'Hara, who is coordinating a study in Iowa that follows 300 pregnant women and their children, about one hundred of whom had been recruited before the flooding in Iowa in June 2008.

Suzanne King widened the scope of her research program on PNMS to include the floods in Iowa in 2008 and Australia in 2011. She quickly found colleagues at the scene of these disasters who were already studying aspects of maternal distress during pregnancy. The creativity and responsiveness of the principle investigator of Project Ice Storm earned her unhopd-for access to data collected before the catastrophes.

Project Ice Storm: an innovative and groundbreaking project

Launched in 1998 during the Montreal ice storm, the work of Suzanne King has led to major advances in our understanding of how prenatal stress affects child development. “We have found that PNMS has long-term effects on children's cognitive, behavioural, motor and physical development,” explained Suzanne King. “Given that minor problems persist in children who were born in the context of a moderate disaster such as the ice storm, we suspect that these symptoms could be much worse in the case of a tsunami or an earthquake like the one in Haiti.” For a long time, Project Ice Storm was the only study in the world on PNMS related to a natural disaster, or an independent stressor (i.e., one that outside any possible influence by the mother).

Access to new samples will significantly increase the number of families that Suzanne King will follow over the long term. This year, the children of the ice storm will be 14 years old, and they are entering a period of major physical and psychological change. Suzanne King is therefore about to start a promising phase in her research.

For more information about Project Ice Storm, visit:

http://www.douglas.qc.ca/pages/view?section_id=230&locale=en

<http://www.mcgill.ca/projetverglas/icestorm>

<http://www.douglas.qc.ca/researcher/suzanne-king>

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