One of Canada’s most preventable causes of developmental disability is Fetal Alcohol Spectrum Disorder (FASD), which occurs when the developing fetus is exposed to alcohol. FASD can lead to behavioural and physiological consequences throughout life including cognitive and behavioural deficits, developmental defects and physiological abnormalities. It is understood that the amount of alcohol consumed and time of consumption during pregnancy have large impacts on the severity of FASD. Recent studies in mouse models have shown that there are genetic influences that affect the amount of cell death in the developing brain that are both strain- and region-specific. Evidence also suggests that the genetics of both the fetus and the mother can have an effect on the amount of cell death, but the extent to which each contributes is currently unknown. Using mice models, this study investigates the effects of maternal genetics on the degree of cell death in the developing brainstems of her offspring. The method of comparison is referred to as a reciprocal cross, where the differences in parental genetics allows the influence of environmental and genetic conditions to be assessed in their offspring. Preliminary results show that the mother’s womb environment affects the extent to which alcohol-dependent cell death occurs in the offspring’s developing brain stem. The results of this study may lead to the development of innovative treatments aimed at reducing the effects of FASD by considering the complex and interdependent genetic and environmental factors between mother and offspring.

Themes:

Check (highlight) the most applicable theme according to the abstract.

| Innovation and Technology | Health and Wellness | Culture and Society | Sustainability and Conservation |

Comments:

The abstract was well written!