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Prior to beginning my research at the University of Alberta, I graduated with a BSc. (First Class Honours) in Biochemistry from the University of Calgary (2011-2015). I began my studies at the University of Alberta with Dr. Stephane Bourque as an Alberta Innovates- Health Solutions Summer Student prior to joining the Department of Pharmacology as an MSc. student in September 2015. Transfer to the PhD program was completed in April of 2017. During my tenure as a graduate student I have been funded by studentships from the Canadian Institutes of Health Research (CIHR Master's Award; 2016-2017), Alberta Innovates Health Solutions (2016-2020) and most recently a Vanier Scholarship (CIHR; 2018-2021). My project focuses on the role of perinatal iron-deficiency on the 'programming' of chronic disease in offspring. More specifically, my project utilizes a rodent model of perinatal iron-deficiency to determine how it impacts cardiovascular (cardiac, renal and vascular) development and function throughout the life-course of offspring.

Our exciting results published in *FASEB Journal*, previously selected for podium presentations at the Canadian National Perinatal Research Meeting (February 2017) and Experimental Biology (April 2017), are the first to identify sex- and organ-specific patterns of mitochondrial dysfunction and oxidative stress in iron-deficient fetal kidneys and livers. Our results suggest that male offspring are more susceptible to mitochondrial dysfunction and oxidative stress *in utero* due to iron-deficiency compared to females. Furthermore, we have identified that the kidney is more vulnerable to dysfunction compared to the liver. This work provides a mechanistic platform which can be utilized to test the efficacy of new treatment strategies to improve fetal outcomes in pregnancies complicated by iron-deficiency. In addition, our study underscores the importance of studying both males and females in experimental studies, because they often exhibit marked differences.

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