



NOVEMBER NEWSLETTER

The Women's Health Advocacy Club aims to raise awareness and break the stigma surrounding health issues faced by individuals who are female-identifying.

**INTERESTED IN WOMEN'S
HEALTH ADVOCACY?**

Stay tuned to learn about
how to get involved!

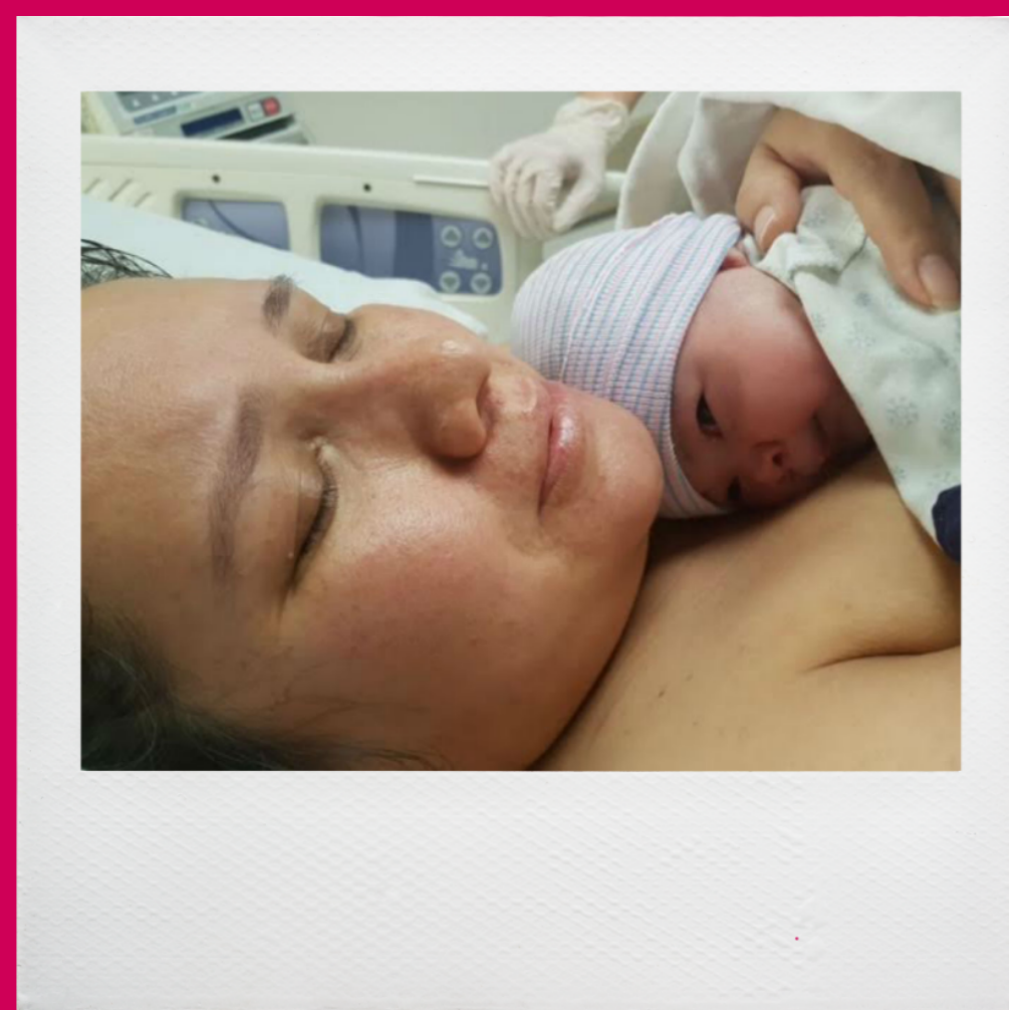
**THIS MONTH QWHA
PROMOTES**



Maternal Health

BIRTH EVACUATIONS IN CANADA

- In many Indigenous, remote, and rural areas of Canada, pregnant women in their third trimester are required to travel to hospitals in urban centres to give birth.
- It may be particularly harmful to Indigenous women as it is largely based on a Euro-centric biomedical model of health.



- Indigenous women report more positive experiences giving birth locally compared to medical evacuation.
- Reasons include:
 - Greater parent satisfaction
 - More paternal involvement
 - Ability to give birth with a familiar health care provider

THE NATIONAL ABORIGINAL COUNCIL OF MIDWIVES



NACM
NATIONAL ABORIGINAL
COUNCIL OF MIDWIVES

- NACM advocates against "routine/blanket" evacuations, while recognizing that some births may need to happen in a hospital.
- They call for increased funding to develop community-based education programs for Indigenous midwives, and to train more Indigenous midwives in remote communities.



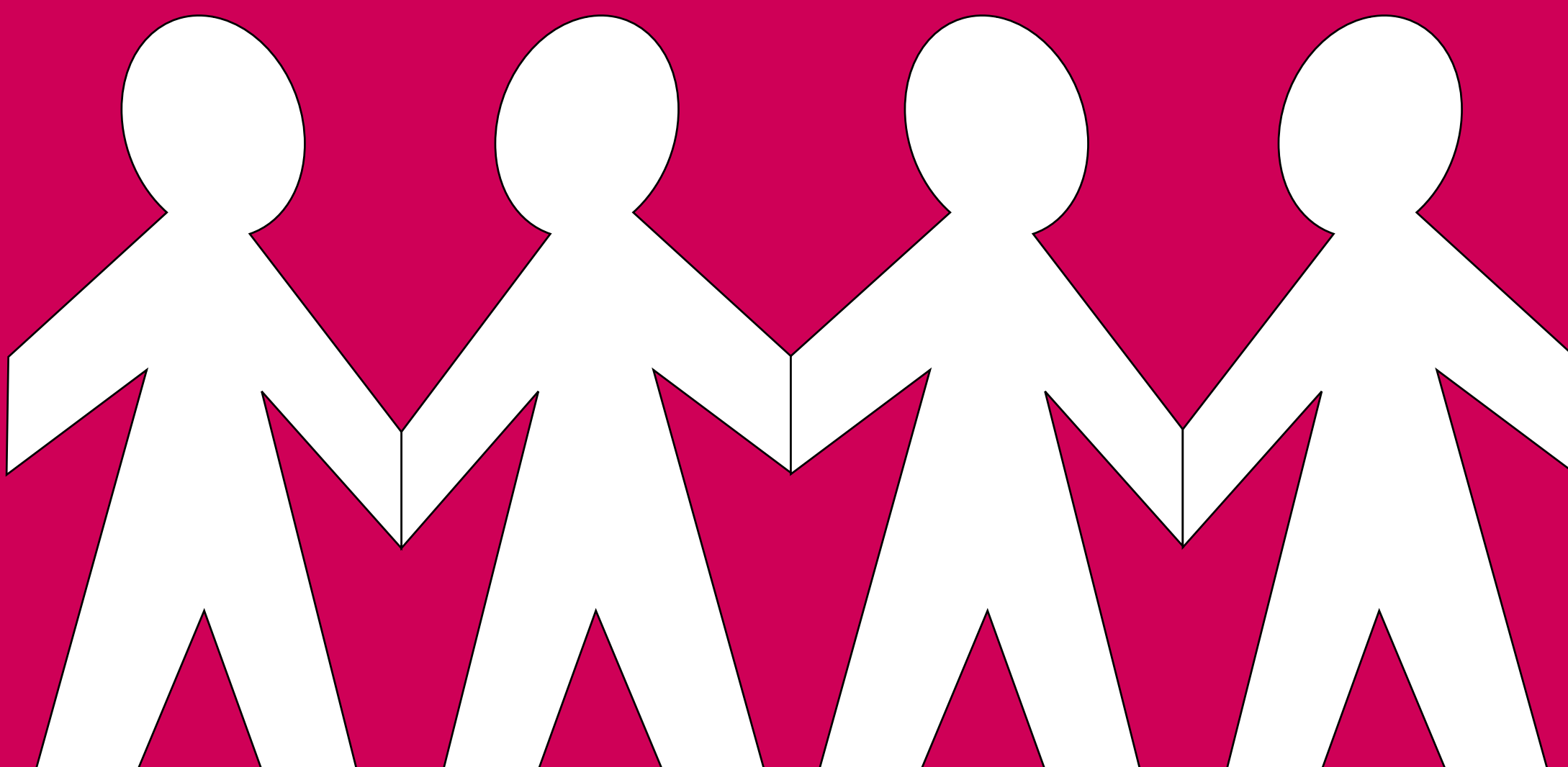
WHAT CAN YOU DO?

The NACM states that the return of birth to Indigenous communities is "a critical act towards reconciliation".

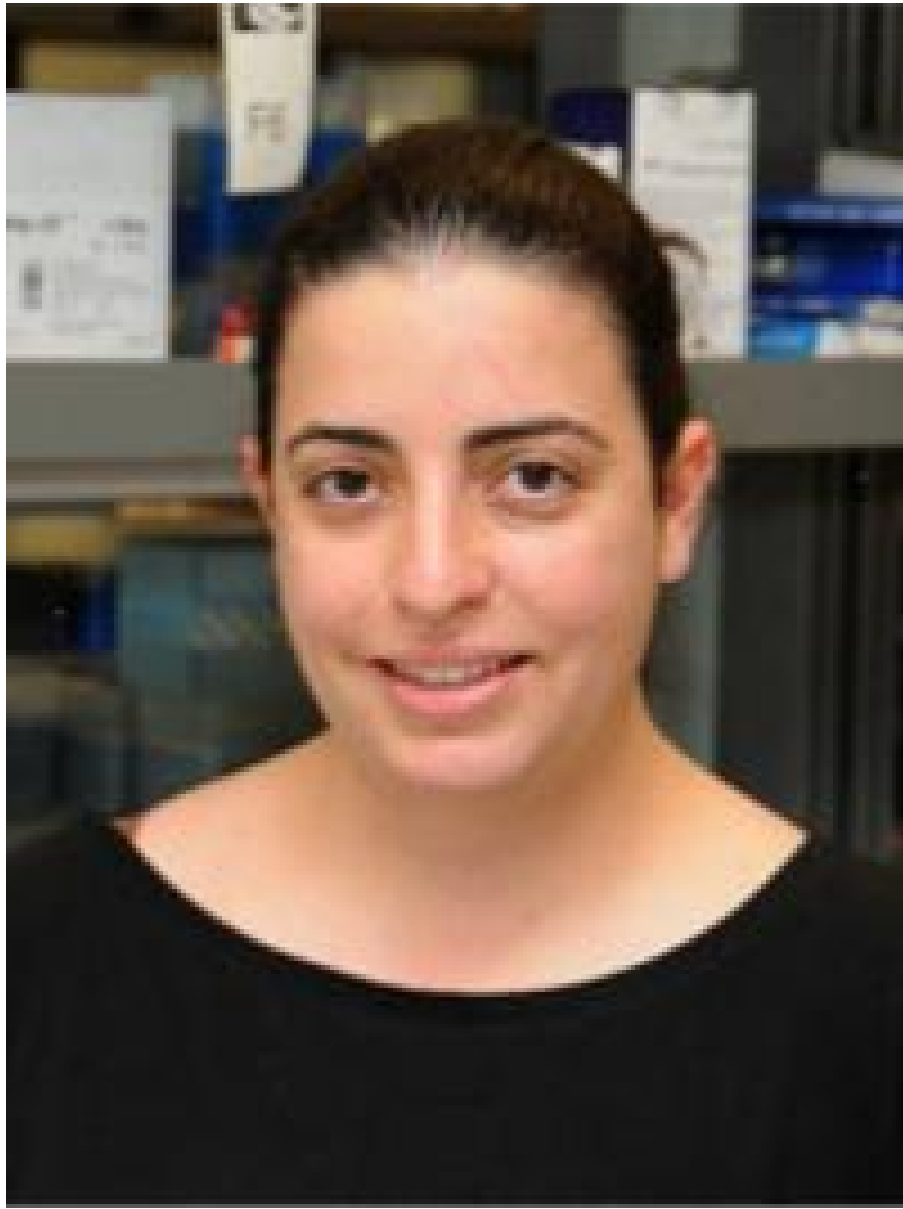
- If you are part of an organization, you can officially endorse the NACM's position statement on birth evacuation, and other issues



- You can access free webinars geared towards healthcare professionals and more resources about cultural safety on the First Nations Health Authority website.



SERGHIDES LAB



The Serghides Lab focuses on determining the safety and toxicity of currently used antiretrovirals (HIV+ medications) in pregnancy.



IMPORTANT DEFINITIONS

Human Immunodeficiency Virus (HIV): HIV attacks the body's immune system, and if left untreated, it can lead to AIDS (acquired immunodeficiency syndrome).

Antiretrovirals: (antiretroviral drugs) work by stopping the virus replicating in the body. This allows the immune system to repair itself and prevent further damage.

Antiretroviral treatment: Is the combination of several antiretroviral medicines used to slow the rate at which HIV makes copies of itself (multiplies) in the body.

MORE IMPORTANT DEFINITIONS

Preterm: Defined as babies born alive before 37 weeks of pregnancy are completed.

Biomarkers: Are the measures used to perform a clinical assessment such as blood pressure or cholesterol level and are used to monitor and predict health states in individuals.

Biomarkers of Risk: Are biomarkers that is associated with an increased chance of developing a disease or medical condition in an individual who does not yet have that disease or medical condition.



INTRO ON RESEARCH

Antiretroviral treatment in pregnancy has improved maternal health and dramatically reduced the rate of HIV transmission, with over 1 million pregnant women taking these medications annually.

While antiretrovirals are essential for maternal health and preventing HIV transmission to the infant, these medications have been associated with preterm and small for gestation age births

The challenge is identifying the safest medications to optimize maternal-child health outcomes, while continuing to achieve high efficacy.



OBJECTIVES

With the overall objective of optimizing antiretroviral therapy for pregnant women with HIV and their infants, the aims of the Serghides Lab are:

1. To identify mechanisms that contribute to adverse birth outcomes in the context of HIV and antiretroviral exposure, as well as identify biomarkers of risk, and interventions to improve outcomes;
2. To understand the effects of in utero exposure to HIV and antiretrovirals on the development of children who are HIV exposed but uninfected and identify underlying mechanisms;
3. To develop animal and ex-vivo models to facilitate the study HIV and antiretroviral effects in the context of pregnancy.



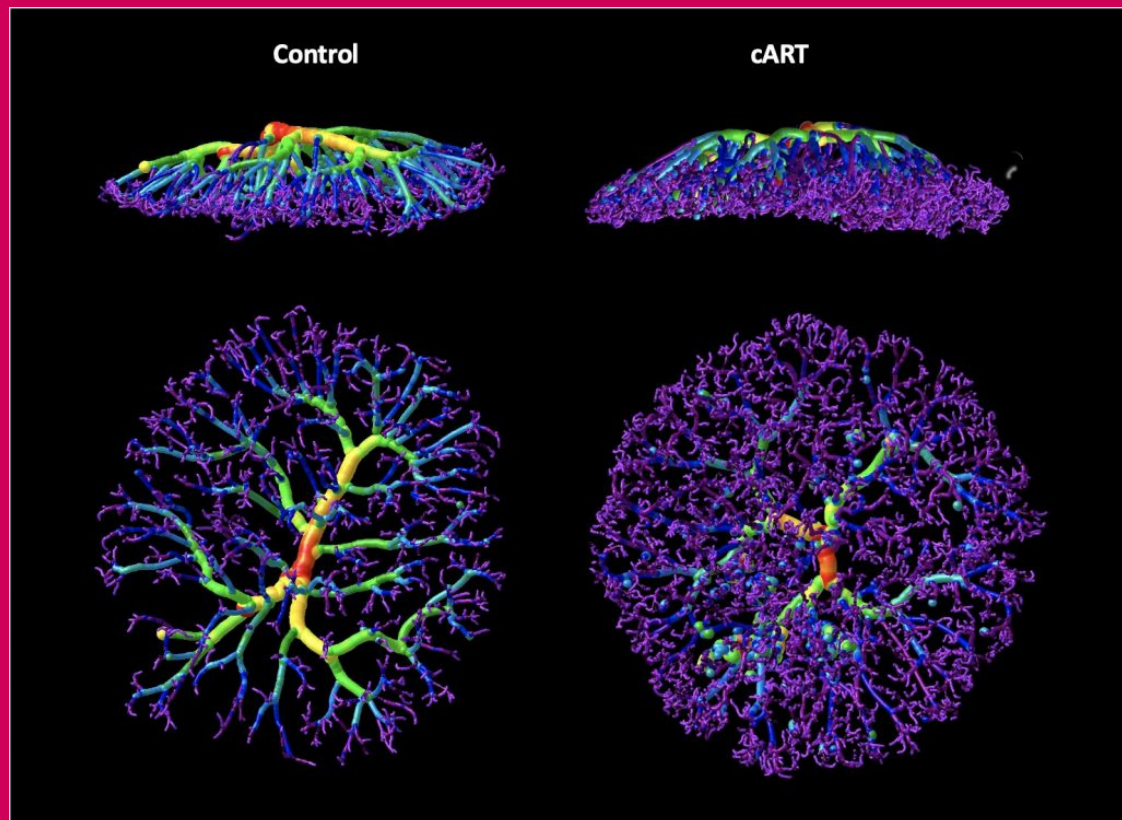
CURRENT PROJECTS

HIV, ANTIRETROVIRALS, AND HORMONAL DYSREGULATION IN PREGNANCY

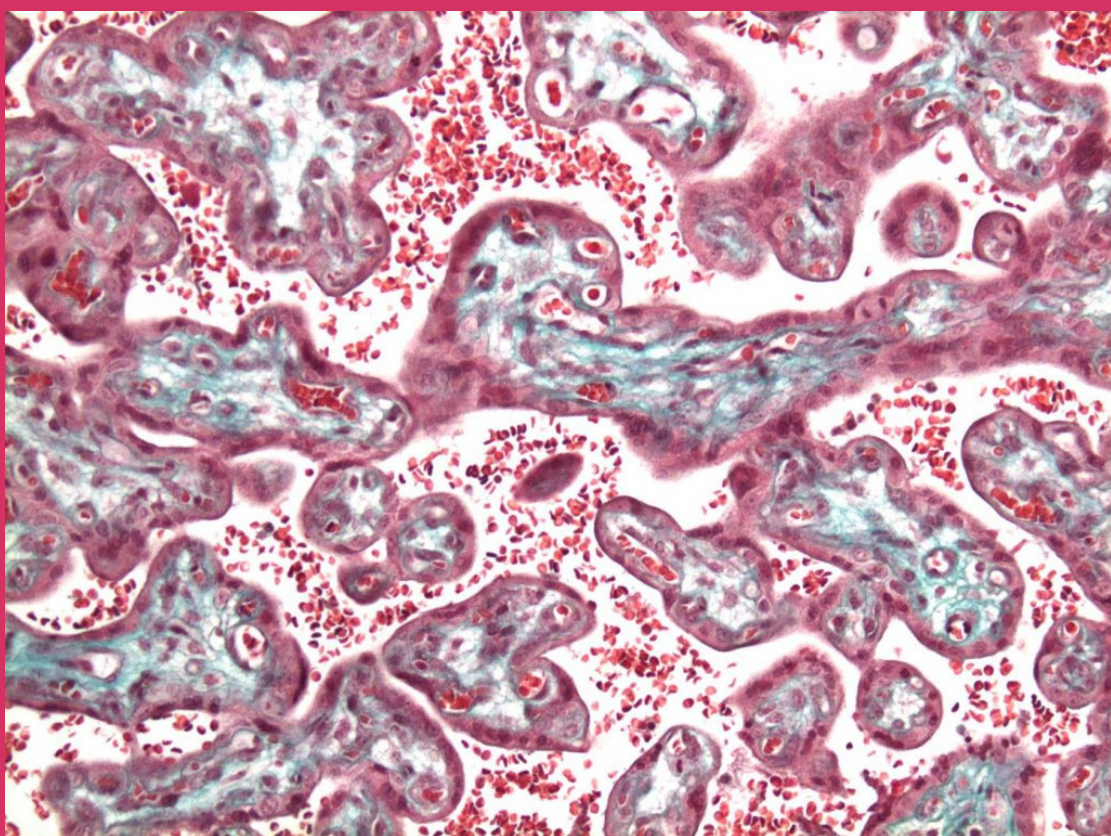
Working with Canadian and international collaborators, the lab is studying the impact of different classes of antiretrovirals on maternal hormones in pregnancy and how these changes affect the baby's growth and development in utero and postnatally. The lab was the first to identify a link between antiretroviral use in pregnancy and changes in hormone levels.



OTHER PROJECTS



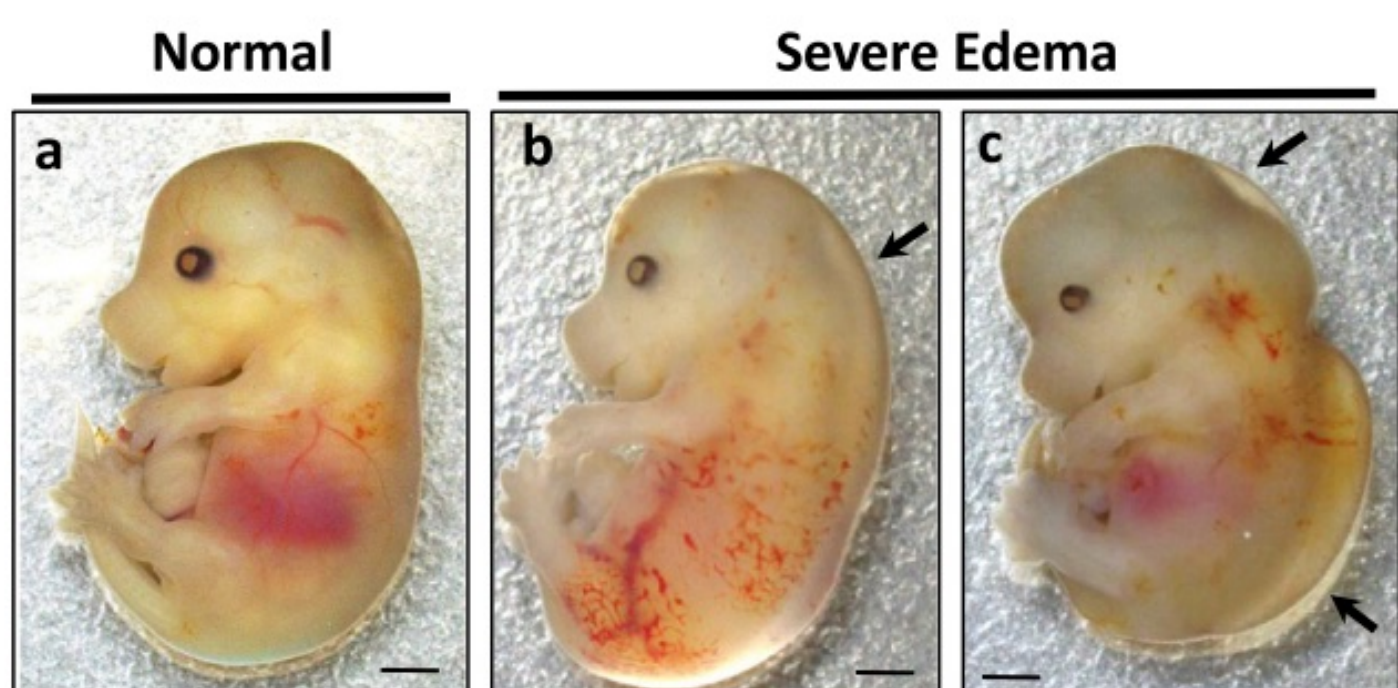
**HIV, Antiretrovirals,
and the Placenta**



**HIV, Antiretrovirals,
and the Decidua**



**Impact of *in utero*
Exposure to ARVs on
Fetal Development
and Neurocognitive
Performance**



**Dolutegravir in
Pregnancy,
Metabolic Alterations,
and Fetal Defects**

EXPLORING THE IMPACT OF HIV INFECTION & ANTIRETROVIRAL THERAPY ON PLACENTA MORPHOLOGY



This paper examined placenta morphology (physical form and external structure) and associations with birth outcomes in a group of Canadian women living with HIV (HIV+) on antiretroviral therapy (ART) from conception and HIV-uninfected (HIV) women.

Important Findings:

The data suggest that HIV/ART exposure affects placenta morphology and is associated with higher rates of abnormal cord insertion (an uncommon pregnancy complication).

PERICONCEPTIONAL EXPOSURE TO LOPINAVIR, BUT NOT DARUNAVIR, IMPAIRS DECIDUALIZATION: A POTENTIAL MECHANISM LEADING TO POOR BIRTH OUTCOMES IN HIV-POSITIVE PREGNANCIES



This paper investigated if HIV protease inhibitor (PI)-based combination antiretroviral therapy (cART) initiated before conception affect key events in early pregnancy.

Important Findings:

Two PIs currently offered as cART options in HIV-positive pregnancies were evaluated, and we found that one does affect key events in early pregnancy, called lopinavir.



SO, WHAT DOES THIS MEAN?

This research helps scientists understand why the highest adverse birth outcomes are reported in HIV-positive pregnancies exposed to a lopinavir-cART from conception. From this, it is recommended that lopinavir should be avoided, especially in the first trimester.

Lopinavir is currently among the top drug candidates being considered for clinical trials for therapeutic use against COVID-19. These findings provided evidence of safety concerns surrounding the use of the treatment in pregnancy, and women of reproductive age considering participation in such trials should be made aware of these concerns.



STUDY FINDS DEPRESSION DURING PREGNANCY CAN ALTER A CHILD'S BRAIN



- University of Calgary research is highlighting the importance of screening pregnant mothers for depression.
- If left untreated, it was found that depression during and after pregnancy may alter the child brain.

“WHAT WE SAW SUGGESTS THAT THE KIDS’ BRAINS ARE DEVELOPING PREMATURELY, SO THEY’RE SORT OF AGEING TOO QUICKLY”

– Dr. Catherine Lebel, a researcher with the University of Calgary and the Alberta Children’s Hospital Research Institute.

- Children can lose lose plasticity, flexibility, adaptability of their brain.
- Lebel's research lab employed MRI to analyze the brain structures of 52 children between 2–5 years of age.
- Most children had mothers who did not have depression during/after pregnancy, but 5 mothers did.
- Maternal depressive symptoms in trimester 2 were related to the child's brain structure.
 - + Depressive symptoms in postpartum period, so up to 2–3 months after the kids were born.

STUDY FINDS DEPRESSION DURING PREGNANCY CAN ALTER A CHILD'S BRAIN CONT.



- 18% of women experience depression during pregnancy, but prenatal depression screening isn't commonly done.
- More research needed to determine the impact of brain changes long-term on kids.
- Other studies have found that kids born to mothers with depression during/after pregnancy are more likely to struggle in school or have problems relating to others.

**THE FULL STUDY:
PREPARTUM AND
POSTPARTUM MATERNAL
DEPRESSIVE SYMPTOMS ARE
RELATED TO CHILDREN'S
BRAIN STRUCTURE IN
PRESCHOOL**



Stay Tuned for our...

DECEMBER NEWSLETTER

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