



The University of British Columbia Reproductive Infectious Disease Program

The Reproductive Infectious Diseases (RID) Program is a network of health professionals, researchers and knowledge users led by Dr. Deborah Money that is dedicated to advancing reproductive infectious diseases care and research internationally. Through local, national and global research collaborations, the team works to address emergent knowledge gaps and provide guidance for the prevention, treatment, and care of reproductive infectious diseases. When a global pandemic is declared or an emerging pathogen is identified, our team is the group looked to nationally to coordinate efforts to address the issue in the context of pregnancy. Our team employs a women’s health, evidence-based lens to research and care for reproductive infectious diseases across the life course. From team leads to trainees, we are committed to rigorous, ethical, inclusive research and care.

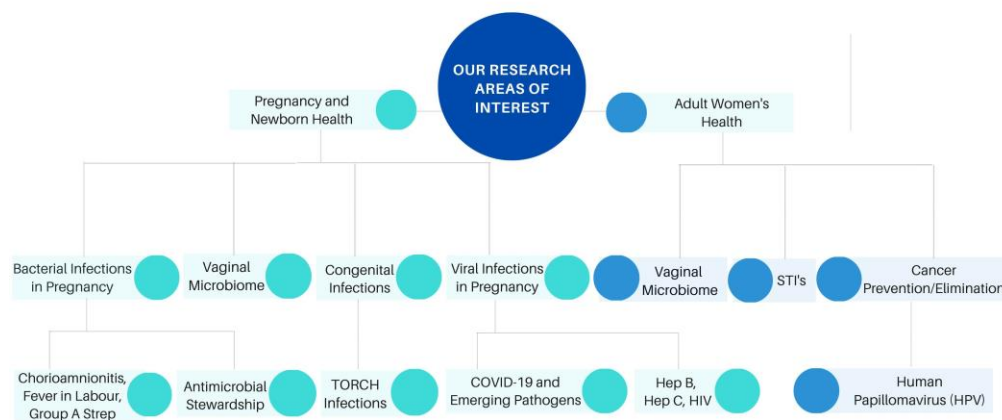
The RID Clinic is located at BC Women’s Hospital and Health Centre. The research program is part of the Women’s Health Research Institute, a Faculty of Medicine Centre.

Our Team

The research team consists of Dr. Deborah Money, co-investigators Dr. Julie van Schalkwyk and Dr. Chelsea Elwood, postdoctoral fellow Dr. Elisabeth McClymont, as well as many trainees at the fellowship, graduate, and undergraduate levels, and research support staff including research managers, coordinators, and assistants, as well as a biostatistician.

Our Research

Our research areas of focus include emerging pathogens (e.g. COVID-19) during pregnancy and the postpartum period, HIV, human papillomavirus, hepatitis, perinatal infections, the vaginal microbiome, and antimicrobial stewardship.



Our program has been active for 29 years with many highly valuable discoveries that have translated into practice changes to improve women’s health. These include studies of the impact of antiretroviral medications in preventing transmission of HIV from the pregnant woman/person to their infants. We studied the role of an antiviral to prevent transmission of the *Herpes simplex virus* (HSV) from the pregnant woman/person to their infant at the time of delivery leading to routine practice of the use of valacyclovir to reduce unnecessary caesarian section for women/persons living with HSV infection. Our



studies of the HPV vaccine in girls and women living with HIV have informed HPV vaccine policy. We have studied the complexity of the vaginal microbiome in reproductive health and disease and dispelled myths about the nature of the vaginal microbiome.

Some of our active projects include:

The **Canadian Surveillance of COVID-19 in Pregnancy project (CANCOVID-Preg)** is a prospective national surveillance project, led and centrally coordinated by the UBC Reproductive Infectious Disease team, to monitor outcomes associated with COVID-19 in pregnancy. CANCOVID-Preg data have confirmed international findings that pregnant women/persons were at increased risk of severe illness from SARS-CoV-2, including the need for maternal hospitalization and admission to an intensive care unit (ICU) and now have shown that this has been greatly reduced in the Omicron era in part due to high uptake of vaccination. The **Canadian COVID-19 Vaccine Registry for Pregnant and Lactating Individuals (COVERED)** is a national registry of unvaccinated and vaccinated pregnant and lactating individuals. Participants complete surveys regarding COVID-19 vaccine attitudes, health experiences and pregnancy outcomes. These data are a key part of monitoring vaccine safety and how well the vaccines protect against COVID-19. This also includes an **Immune Sub-study** to measure the immune response in pregnancy and the transmission of antibodies to the fetus through the placenta or to the infant through breast milk. The COVID-19 projects have been supported by the Public Health Agency of Canada (PHAC) and the Canadian Institutes for Health Research (CIHR).

The **Study of Reduced Dosing of the Nonavalent HPV Vaccine in Women Living with HIV (NOVA-HIV)** is a pan-Canadian randomized controlled trial evaluating whether two doses of the 9vHPV vaccine are non-inferior to three doses in women living with HIV (WLWH) age 18-45. For persons who are immunocompromised, we do not have sufficient data on how to deploy HPV vaccines and HIV is a major global contributor to HPV incidence and cervical cancer development, resulting in significantly higher rates of disease among the world's estimated 17.8 million WLWH. Results from this study will inform future policy and guidelines for HPV vaccination in WLWH.

The **Maternal Microbiome Legacy Project** investigates the relationship between the maternal and infant microbiome. Maternal vaginal swabs, infant stool and breast milk were collected from mother-infant pairs who delivered both vaginally and via caesarian section. This study used advanced gene-based methods to profile the bacterial communities present in women in both delivery method groups and connected these to the infant gut bacterial community in the first 3 months of life. The research team showed that mothers' vaginal microbiome composition does not predict the composition of babies' stool microbiome at 10 days or three months after birth, regardless of birth mode, and that antibiotic exposure during delivery influences infant stool microbiome. The microbiome of breast milk and its relationship to the infant microbiome is still being investigated.

We collaborate extensively with other institutions, networks, clinics, and laboratories to maximize the quality, scope, and impact of our work. Our collaborations include Dr. Janet Hill and her microbial ecology and molecular diagnostics lab, the Hill Lab of University of Saskatchewan, Dr. Gina Ogilvie and the Global Control of HPV Related Diseases and Cancer Team, researcher Dr. H el ene C ot e, the Oak Tree Clinic of BC Women's Hospital and Health Centre, the Canadian HIV Trials Network, the Canadian Perinatal HIV/AIDS Research Group (CPHSP), the Gynecologic Cancer Initiative of British Columbia, and the British Columbia Centre for Disease Control (BCCDC).