

# Reproductive Infectious Diseases Research Program

## Annual Report 2022

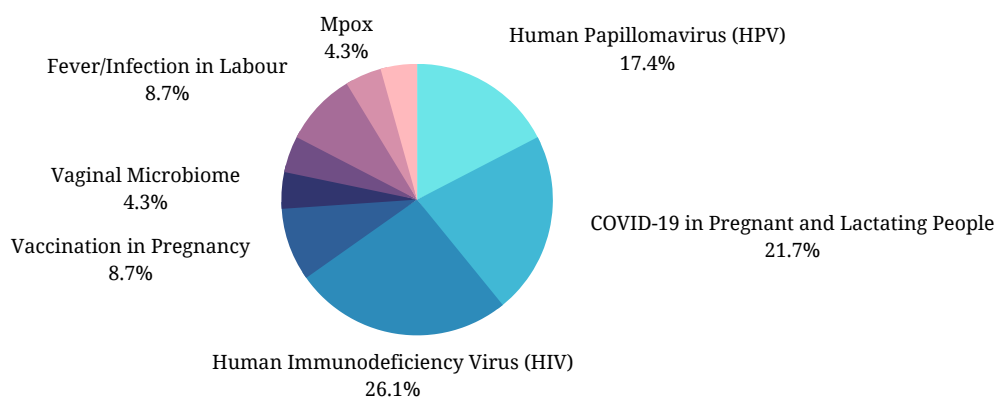
Program Lead	Dr. Deborah Money
Co-Investigators	Dr. Julie van Schalkwyk, Dr. Chelsea Elwood
Core Partners	Dr. Janet Hill, Dr. Mel Kraiden, and national teams (see Appendix)
Fellows	<ul style="list-style-type: none"><li>● <b>Postdoctoral</b><ul style="list-style-type: none"><li>○ Dr. Elisabeth McClymont</li></ul></li><li>● <b>Clinical</b><ul style="list-style-type: none"><li>○ Dr. Andrea Atkinson</li><li>○ Dr. Jeffrey Wong</li></ul></li></ul>
Research Managers and Coordinators	<ul style="list-style-type: none"><li>● <b>Senior Research Manager</b><ul style="list-style-type: none"><li>○ Evelyn Maan</li></ul></li><li>● <b>Managers</b><ul style="list-style-type: none"><li>○ Janice Andrade</li><li>○ Tiffany Reeve</li></ul></li><li>● <b>Coordinators</b><ul style="list-style-type: none"><li>○ Melissa Watt</li><li>○ Arezou Azampanah</li></ul></li><li>● <b>Laboratory Coordinator</b><ul style="list-style-type: none"><li>○ Beheroze Sattha</li></ul></li></ul>
Biostatistician	Dr. Arianne Albert (January-August 2022)
Research Assistants	Isabelle Korchinski, Ianna Folkes, Sela Grays, Lucia Forward, Omnia Taha, Fiza Syal, Jordan Ingel, Falla Jin
Students and Trainees	<ul style="list-style-type: none"><li>● <b>PhD Student</b><ul style="list-style-type: none"><li>○ Zahra Pakzad</li></ul></li><li>● <b>Residents</b><ul style="list-style-type: none"><li>○ Kirsten Bock</li></ul></li></ul>

	<ul style="list-style-type: none"> <li>● <b>Medical Students</b> <ul style="list-style-type: none"> <li>○ Winnie Fu</li> <li>○ Suraya Bondy</li> <li>○ Marisa Dorling</li> <li>○ Sarah Mohn</li> </ul> </li> </ul>
Volunteers	Burak Ozkan

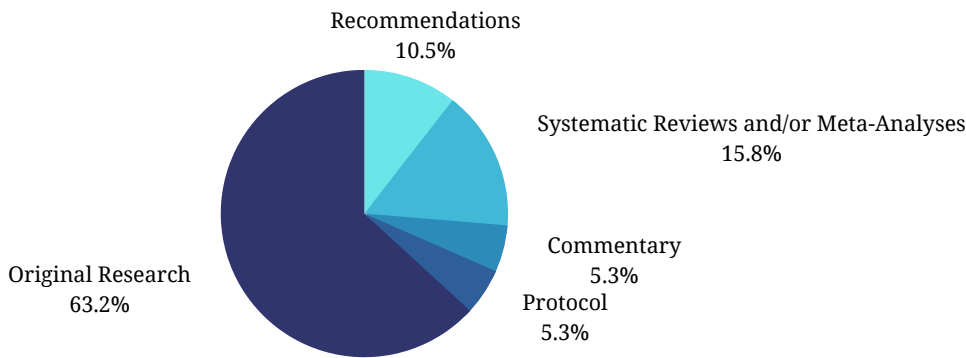
This annual report presents all RID activities from the 2022 calendar year. Certain publications, funding, and presentations from the past year are highlighted below. A comprehensive list of activities begins on page 6.

Publications

Members of the RID team published 19 journal articles in 2022. These peer-reviewed articles covered numerous topics related to infection in pregnancy, vaccination, STIs, and more.



Of our 19 publications, we had one commentary article, one protocol, two scientific recommendations, three systematic reviews or meta-analyses, and twelve original research articles.



A highlight of our work this year was our publication in the Journal of the American Medical Association (JAMA), titled "Association of SARS-CoV-2 Infection During Pregnancy With Maternal and Perinatal Outcomes". This publication provided evidence that SARS-CoV-2 infection during pregnancy is significantly associated with an increased risk of adverse

maternal outcomes and preterm birth. **The article was viewed over 50,000 times on the publisher's website and was shared on Twitter by over 500 people**, which landed it in the top 5% of all research outputs scored by Altmetric ([jamanetwork.altmetric.com/details/127613924](https://jamanetwork.altmetric.com/details/127613924)).

Another highlight was our collaboration with George Washington University's Perinatal COVID-19 Sequential Prospective Meta-Analysis Project. This international collaboration involved more than 100 investigators and stakeholders working in 41 countries. Our Canadian data on COVID-19 in pregnancy and the postpartum period were used in two publications with this group.

## Conferences

Following the changes made as a result of the COVID-19 pandemic, the RID team adapted to both in-person and online conferences over the year. This hybrid arrangement allowed our investigators to submit 13 different oral and poster presentations at 6 conferences.

A highlight of our conference season was the Annual Meeting of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), in August of this year. Drs. Sarah Mohn, Chelsea Elwood, Andrea Atkinson, Deborah Money, and Elisabeth McClymont (pictured below) represented the RID team in Boston, Massachusetts. There, they kept busy with **six presentations**: three which covered our three COVID-19 research projects, one on Maternal and Infant CMV detection in Women Living with HIV, one on the Vaginal Microbiome and Infant Gut Microbiome, and one on Penicillin Allergy De-labelling in Pregnancy.



## Grants and Funding

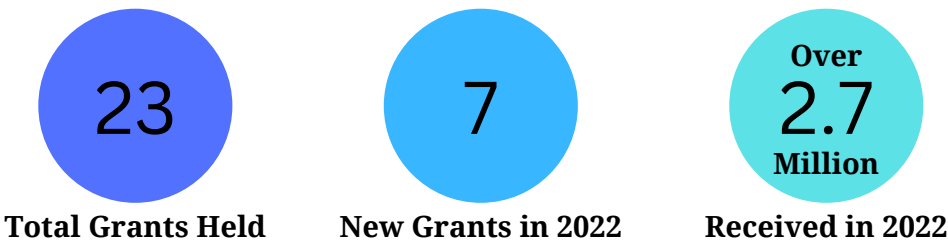


COVID-19  
IMMUNITY  
TASK FORCE

GRUPE DE TRAVAIL  
SUR L'IMMUNITÉ  
FACE À LA COVID-19

We would like to extend our immense gratitude to the Public Health Agency of Canada (PHAC) and their COVID-19 Immunity Task Force (CITF) for their ongoing COVID-19 research funding. Their generous grants of over \$7 million have been the key to our COVID-19 research success.

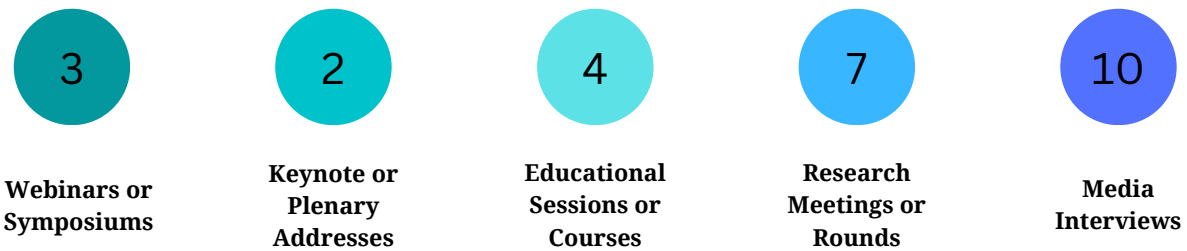
RID investigators were funded by a total of 23 grants this year. Sixteen of these were ongoing from previous years, and seven were newly awarded. Funding from the seven grants received in 2022 totaled **over 2.7 million dollars**, allowing us to begin new projects and continue with much of our ongoing research.



Another highlight of 2022 came with the CIHR Spring Project Grant announcements. Our study, titled "A Study of Reduced Dosing of the Nonavalent HPV Vaccine in Women Living with HIV", was awarded 1.6 million dollars for five years. This funding will allow us to conduct this phase IV clinical trial and continue to build upon our previous HPV in HIV research.


### Presentations

RID investigators were involved in numerous education sessions, research rounds, keynote and plenary addresses, and media interviews over the year. Prioritizing knowledge translation with both scientific and lay communities has allowed us to share our findings, aid in the creation of public health policy, and fight against misinformation. Dr. Deborah Money was invited to be part of 2 working groups for the National Advisory Committee for Immunizations (NACI). Her involvement in the the Influenza Vaccine in Pregnancy Working Group and the COVID-19 Vaccine in Pregnancy Working Group will influence these recommendations for the pregnant population.




A highlight of our knowledge translation activities this year was Dr. Deborah Money's interview with UBC Media Relations, titled "Bivalent vaccines are here: what it means for people who are pregnant". This interview generated very positive and sustained web traffic, which was driven mostly by Google searches from the public. **The Q&A was one of the top 3 most viewed stories through UBC Media Relations** for over a month following its


publication. Additionally, the interview was featured by Google at the top of search results following the notable public interest.





bivalent vaccine pregnancy


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How do we know the bivalent vaccines are safe? **There is substantial evidence showing that mRNA vaccines are safe and effective to receive during pregnancy.** To date, our national study on COVID-19 vaccines in pregnancy has surveyed more than 7,100 volunteers and shown no evidence of adverse events. Nov 8, 2022



<https://news.ubc.ca> › [2022/11/08](#) › [bivalent-vaccines-are-...](#)

[Bivalent vaccines are here: What it means for people who are ...](#)

 About featured snippets

 Feedback

In March, the International Federation of Gynecology and Obstetrics (FIGO) released a webinar titled "COVID during pregnancy: an update", wherein five experts gathered to discuss the epidemiological, clinical and obstetrical outcomes of SARS-CoV-2 in pregnancy, and the impact of vaccination for pregnant people worldwide. **This international webinar featured a presentation by Dr. Deborah Money**, where she shared insight from our Canadian CANCOVID-Preg Surveillance Program. Dr. Money's presentation was shared alongside those from her expert counterparts in Germany, Malaysia, Lebanon, and Brazil.

## Awards

In June, Dr. Deborah Money was the **plenary speaker** at the SOGC's Annual Clinical and Scientific Conference. Her presentation, titled "Reproductive Infectious Diseases (RID) Research Program" provided an overview of many of the projects that the RID team has been involved in over the recent years. Following her presentation, she was presented with the Society of Obstetricians and Gynaecologists of Canada (SOGC) **2022 Excellence in Research Award**. The Excellence in Research Award recognizes outstanding scientific leadership, research mentoring, creative effort and major research accomplishments of a Canadian researcher.

## Publications

In Press: McClymont, E., Faber, MT., Belmonte, F., Kjaer, SK. Spontaneous Preterm Birth Risk among HPV Vaccinated and Unvaccinated Women in Denmark – a nationwide study of more than 240 000 singleton deliveries. BJOG.

In Press: Atkinson, A., Albert, A., McClymont, E., Andrade, J., Beach, L., Bolotin, S., Boucoiran, I., Bullard, J., Charlton, C., Crane, J., Dougan, S., Forest, J-C., German, G., Giguere, Y., Girouard, G., Hankins, C., Kraiden, M., Lang, A., Levett, P., Minion, J., Murphy-Kaulbeck, L., Neudorf, C., Poliquin, V., Robinson, J., Scott, H., Tran, V., Zahariadis, G., Zhou, HY., The Antenatal Serostudies Team, and Money, D. Canadian COVID-19 Population Serological Survey Utilizing Antenatal Serum Samples. CMAJ Open.

McClymont, E., Faber, M.T., Lindquist, S., Bone, J.N., and Kjaer, S.K. Human Papillomavirus Infection Among Pregnant Women Living with HIV: A Systematic Review and Meta-Analysis. 19 October 2022. JAIDS. 91(2): 122-9.

McClymont, E., Money, D. Addressing the needs of pregnant individuals during the COVID-19 pandemic. 18 October 2022. UBC Medical Journal. 2022: 14.1 (10-11)

Smith, E., Oakley, E., Grandner, GW., Rukundo, G., Farooq, F., Ferguson, K., Baumann, S., Waldorf, KA., Afshar, Y., Ahlberg, M., Ahmadzia, H., Akelo, V., Aldrovandi, G., Bevilacqua, E., Bracero, N., Brandt, JS., Broutet, N., Carrillo, J., Conry, J., Cosmi, E., Crispi, F., Crovetto, F., del Mar Gil, M., Delgado-Lopez, C., Divakar, H., Driscoll, A.J., Favre, G., Buhigas, I.F., Flaherman, V., Gale, C., Godwin, C.L., Gottlieb, S., Gratacos, E., He, S., Hernandez, O., Jones, S., Joshi, S., Kalafat, E., Khagayi, S., Knight, M., Kotloff, K., Lanzone, A., Longo, V.L., Le Doare, K., Lees, C., Litman, E., Lokken, E.M., Madhi, S.A., Magee, L.A., Martinez-Portilla, R.J., Metz, T.D., Miller, E.S., Money, D., Mounghmaithong, S., Mullins, E., Nachega, J.B., Nunes, M.C., Onyango, D., Panchaud, A., Poon, L.C., Raiten, D., Regan, L., Sahota, D., Sakowicz, A., Sanin-Blair, J., Stephansson, O., Temmerman, M., Thorson, A., Thwin, S.S., Tippet Barr, B.A., Tolosa, J.E., Tug, N., Valencia-Prado, M., Visentin, S., von Dadelszen, P., Whitehead, C., Wood, M., Yang, H., Zavala, R., Tielsch, J.M. Clinical risk factors of adverse outcomes among women with COVID-19 in the pregnancy and postpartum period: A sequential, prospective meta-analysis. 23 August 2022. American Journal of Obstetrics and Gynaecology (AJOG).

Manca, T.A., Sadarangani, M., Halperin, S.A., Langley, J., McClymont, E., MacDonald, S.E., and Top, K.A. Vaccine regulation should require and enforce the inclusion of pregnant and breastfeeding women in prelicensure clinical trials. 26 July 2022. Human Vaccine & Immunotherapy.

McClymont, E., Albert, A., Wang, C., Dos Santos, S.J., Coutlee, F., Lee, M., Walmsley, S., Lipsky, N., Loutfy, M., Trottier, S., Smaill, F., Klein, M., Yudin, M., Harris, M., Wobeser, W., Hill, J., Money, D., the CTN 236 HPV in HIV Study Team. Vaginal microbiota associated with oncogenic HPV in a cohort of HPV-vaccinated women living with HIV. 1 July 2022. International Journal of STD & AIDS. doi:10.1177/09564624221109686

Balegamire, S., McClymont, E., Croteau, A., Dodin, P., Gantt, S., Abbas, A., Renaud, C., Masse, B., and Boucoiran, I. Prevalence, incidence, and risk factors associated with cytomegalovirus infection in healthcare and childcare worker: a systematic review and meta-analysis. 27 June 2022. Syst Rev. 11:131.

Smith, E.R., Oakley, E., He, S., Zavala, R., Ferguson, K., Miller, L., Grandner, G.W., Omolade Abejirinde, I-O., Afshar, Y., Ahmadzia, H., Aldrovandi, G., Akelo, V., Tippet-Barr, B., Bevilacqua, E., Brandt, J.S., Broutet, N., Buhigas, I., Carrillo, J., Clifton, R., Conry, J., Cosmi, E., Delgado-Lopez, C., Divakar, H., Driscoll, A.J., Favre, G., Flaherman, V., Gale, C., Gill, M., Godwin, C., Gottlieb, S., Hernandez-Bellolio, O., Kara, E., Khagayi, S., Kim, C., Knight, M., Kotloff, K., Lanzone, A., Le Doare, K., Lees, C., Litman, E., Lokken, E., Laurita Longo, V., Magee, L., Martinez-Portilla, R.J., McClure, E., Metz, T., Money, D., Mullins, E., Nachega, J.B., Panchaud, A., Playle, R., Poon, L., Raiten, D., Regan, L., Rukundo, G., Sanin-Blair, J., Temmerman, M., Thorson, A., Thwin, S., Tolosa, J.E., Townson, J., Valencia-Prado, M., Visentin, S., von Dadelszen, P., Adams Waldorf, K., Whitehead, C., Yang, H., Thorlund, K., Tielsch, J. Protocol for a sequential, prospective meta-analysis to describe coronavirus disease 2019 (COVID-19) in the pregnancy and postpartum periods. June 16 2022. PLoS ONE. 17(6): e0270150.

Carvalho, S., Lee, T., Tulloch, K., Sauve, L., Samson, L., Brophy, J., Bitnun, A., Singer, J., Money, D., Kakkar, F., Boucoiran, I., Canadian Perinatal HIV Surveillance Program (CPHSP). Prescribing patterns of antiretroviral treatments during pregnancy for women living with HIV in Canada 2004- 2020: A surveillance study. June 14 2022. HIV Medicine, 1-9. doi: 10.1111/hiv.13346

Poliquin, V., Atkinson, A., Boucoiran, I., Elwood, C., van Schalkwyk, J., Yudin, M., Money, D. SOGC Interim Guidance on Monkeypox Exposure for Pregnant People. 9 June 2022. SOGC Infectious Diseases Committee

McClymont, E., Albert, A., Alton, G.D., Boucoiran, I., Castillo, E., Fell, D.B., Kuret, V., Poliquin, V., Reeve, T., Scott, H., Sprague, A.E., Carson, G., Cassell, K., Crane, J., Elwood, C., Joynt, C., Murphy, P., Murphy-Kaulbeck, L., Saunders, S., Shah, P., Snelgrove, J.W., van Schalkwyk, J., Yudin, M.H., Money, D., and the CANCOVID-Preg Team. Association of SARS-CoV-2 Infection During Pregnancy With Maternal and Perinatal Outcomes. 2 May 2022. JAMA. doi: 10.1001/jama.2022.5906. Epub ahead of print. PMID: 35499852.

Kaida, A., Cameron, B., Conway, T., Cotnam, J., Danforth, J., de Pokomandy, A., Gagnier, B., Godoy, S., Gormley, R., Greene, S., Habanyama, M., Kazemi, M., Logie, C.H., Loutfy, M., MacGillivray, J., Masching, R., Money, D., Nicholson, V., Osborne, Z., Pick, N., Sanchez, M., Tharao, W., Watt, S., Narasimhan, M. Key recommendations for developing a national action plan to advance the sexual and reproductive health and rights of women living with HIV in Canada. 17 April 2022. *Womens Health (Lond)*; 18: 17455057221090829. doi: 10.1177/17455057221090829

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Gormley, R., Nicholson, V., Parry, R., Lee, M., Webster, K., Sanchez, M., Cardinal, C., Li, J., Wang, L., Balleny, R., de Pokomandy, A., Loutfy, M., Kaida, A., CHIWOS Research Team (Money, D.). Help- Seeking to Cope With Experiences of Violence Among Women Living With HIV in Canada. 28 March 2022. *Violence Against Women*; 28(3-4):823-850. doi: 10.1177/10778012211019047.

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Wang, C., Sirluck-Schroeder, I., Sosa Cazales, A., Albert, A., McClymont, E., Kim, SR., van Schalkwyk, J., and Elwood, C. Management of Isolated Fever in Labour Compared with Clinical Chorioamnionitis in a Quaternary Centre. January 2022. *JOGC*. 44 (1): 34-41.

Charpentier, C., McDonald, S., Elwood, C., Ting, J., Grigoriu, A., Pylypjuk, C., Yudin, M., Van Schalkwyk, J., Boucoiran, I. A Survey on Variation in Diagnosis and Treatment of Chorioamnionitis in Tertiary Centres in Canada. January 2022. *J Obstet Gynaecol Can*;44(1):28-33.

Khondoker, C., Kaida, A., Marquez, A., Campbell, A., Cote, H., Albert, A., Pick, N., Maan, E., Russell, E., Prior, J., Elwood, C., Brophy, J., Murray, M., for the Cellular Aging, HIV Comorbidities in Women, Children (CARMA) Team. Factors associated with contraceptive use among women living with HIV in Canada: a controlled, cross-sectional study. January 2022. *Reproductive Health*, 19:3.

## Conference Proceedings

Tanunliong, G., Marquez, C., Chang, Y., Sbihi, H., Nikiforuk, A., Andrade, J., McClymont, E., Elwood, C., Reeve, T., Morshed, M., Krajden, M., Jassem, A., Money, D., Sekirov, I. Longitudinal antibody responses to COVID-19 among women with varying SARS-CoV-2 infection and vaccination histories during pregnancy. October 2022. BCCDC Research Week, Vancouver, Canada.

Marquez, C., Mansour, S., Andrade, J., McClymont, E., Sbihi, H., Chang, Y., Krajden, M., Jassem, A., Money, D., Sekirov, I. SARS-CoV-2 prevalence in residual antenatal serum samples across British Columbia. October 2022. BCCDC Research Week, Vancouver, Canada.

Atkinson, A., McClymont, E., Albert, A., Jassem, A., Krajden, M., Levett, P., Mansour, S., Sekirov, I., Andrade, J., Money, D., for the Antenatal Serostudies Team. Canadian Antenatal COVID-19 Seroprevalence Study; Population Mapping of the COVID-19 Pandemic Utilizing Stored Antenatal Sera. August 2022. Poster presentation at the 2022 Annual Meeting of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), Boston, USA. AJOG.

Atkinson, A., Albert, A., McClymont, E., Money, D., for the CANCOVID-Preg Team. Outcomes and Associations of Severe COVID-19 in Pregnancy; Results from the CANCOVID-Preg Population Surveillance Study. August 2022. Oral presentation at the 2022 Annual Meeting of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), Boston, USA. AJOG.

McClymont, E., Atkinson, A., Albert, A., Andrade, J., Barrett, J., Bogler, T., Boucoiran, I., Castillo, E., D'Souza, R., El-Chaar, D., Fadel, S., Fell, D., Kuret, V., Ogilvie, G., Poliquin, V., Sadarangani, M., Scott, H., Snelgrove, J., Tunde-Byass, M., Money, D., for The COVERED Team. Safety, Effectiveness, and Pregnancy Outcomes following COVID-19 Vaccination During Pregnancy in Canada. August 2022. Poster presentation at the 2022 Annual Meeting of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), Boston, USA. AJOG

McClymont, E., Albert, A., Cote, HCF., Diallo, AB., Elwood, C., Kakkar, F., Money, D., Sauve, L., Soudeyns, H., Gantt, S., Boucoiran, I., for the CARMA-PREG (CIHR CTN 291) Cohort Study. Maternal and Infant Cytomegalovirus Detection Among Women Living with HIV. August 2022. Oral presentation at the 2022 Annual Meeting of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), Boston, USA. AJOG.

Atkinson, A., Zhang, BY., Mak, R., Paquette, V., Dionne, F., Watt, M., Erdle, S., Van Schalkwyk, J., Wong, T., Poliquin, V., Elwood, C. Safety and Savings from Penicillin Allergy De-labelling in Pregnancy: Good Stewardship, Good Cents. August 2022. Oral presentation at the 2022 Annual Meeting of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), Boston, USA. AJOG.

Dos Santos , S., Pakzad, Z., Albert, A., Elwood, C., Hill, J., Money, D. Relationship Between the Maternal Vaginal Microbiome and the Infant Gut Microbiome by Mode of Delivery. August 2022. Oral presentation at the 2022 Annual Meeting of the Infectious Diseases Society for Obstetrics and Gynecology (IDSOG), Boston, USA. AJOG.

McClymont, E., Albert, A., Cote, HCF., Diallo, AB., Elwood, C., Kakkar, F., Money, D., Sauve, L., Soudeyns, H., Gantt, S., Boucoiran, I., for the CARMA-PREG (CIHR CTN 291) Cohort Study. Maternal and Infant Cytomegalovirus Detection Among Women Living with HIV. August 2022. Oral presentation at the 2022 Congenital Cytomegalovirus Public Health & Policy Conference, Ottawa, Canada.

Renaud, C., McClymont, E., Boucoiran, I., Gantt, S., Kakkar, F., Grégoire, Y., and Lewin, A. Collaborations Between Blood Operators and Public Health on Congenital CMV. August 2022. Poster presentation at the 2022 Congenital Cytomegalovirus Public Health & Policy Conference, Ottawa, Canada.

McClymont, E., Albert, A., Cote, HCF., Diallo, AB., Elwood, C., Kakkar, F., Money, D., Sauve, L., Soudeyns, H., Gantt, S., Boucoiran, I., for the CARMA-PREG (CIHR CTN 291) Cohort Study. Cytomegalovirus Viremia During Pregnancy Among Women Living with HIV in Canada. July 2022. Poster presentation at the 24th International AIDS Conference, Montreal, Canada. J Int AIDS Soc.

Tanunliong, G., Marquez, C., Chang, Y., Sbihi, H., Nikiforuk, A., Andrade, J., McClymont, E., Elwood, C., Morshed, M., Levett, P., Krajden, M., Jassem, A., Money, D., Sekirov, I. Serological profiles of human coronaviruses before and after SARS-CoV-2 infection among pregnant women with COVID-19. May 2022. Poster presentation at UBC Pathology Day, Vancouver, Canada.

Balegamire, SJ., McClymont, E., Croteau, A., Dodin, P., Gantt, S., Abbas, A., Renaud, C., Masse, B., and Boucoiran, I. Revue systématique et méta-analyse de la prévalence, de l'incidence et des facteurs de risque associés à l'infection par le cytomegalovirus chez les travailleurs de la santé et les travailleuses en service de garde d'enfants. March 2022. Oral presentation at the Journée annuelle de la recherche OG, Montreal, Canada.

Funding				
McClymont, E., Gantt, S., Boucoiran, I., Goldfarb, D., Sauve, L., Money, D., Sekirov, I.	CMV DETAIL (Improving iDEntification of maTernAl reInfection and characterization of congenitaL CMV strains)	National CMV Foundation Early Career Congenital CMV Research Award	2022/08 - 2024/08	\$50,000 USD
Money, D., McClymont, E., Elwood, C., Albert, A., Walmsley, S., Smaill, F., Yudin, M., Hankins, C., Singer, J., Ogilvie, G., Loutfy, M., Stone, S., Harris, M., Lee, M., Krajden, M., Hill, J., Sadarangani, M., Poliquin, V.	A Study of Reduced Dosing of the Nonavalent HPV Vaccine in Women Living with HIV (The NOVA-HIV Study)	CIHR Spring Project Grant	2022/08 - 2024/08	\$1,600,000
Stuart, G., and Keay, N., McClymont, E., Hanley, G., Money, D., Kwon, J., Gilks, B., Lam, S., Woo, M., et al.	Building a Patient-led and Patient-inspired Knowledge Translation Platform for Gynecologic Cancer Research	MSHRBC Reach Grant	2022/07- 2023/07	\$15,000
Tokuyama, M., Money, D.	Investigating the role of endogenous retroviruses in vaginal health	UBC STAIR Grants	2022/06- 2023/08	\$20,000
Anglesio, M., Hill, J., Money, D., Talhouk, A., Tinker, A.	Digital self-tracking for early detection and prevention of endometrial cancer during reproductive aging	CIHR Spring Project Grant	2022/03- 2023/02	\$100,000

Talhok, A., Anglesio, MS., Hill, K., Money, D., Tinker, A.	Digital self-tracking and self-testing for early detection of endometrial cancer.	CIHR Spring Project Grant	2022/03-2027/03	\$879,750
Money, D., McClymont, E., Elwood, C., Albert, A., Walmsley, S., Smaill, F., Yudin, M., Hankins, C., Singer, J., Ogilvie, G., Loutfy, M., Stone, S., Harris, M., Lee, M.,Krajden, M., Hill, J., Sadarangani, M., Poliquin, V.	A Study of Reduced Dosing of the Nonavalent HPV Vaccine in Women Living with HIV (The NOVA-HIV Study)	CIHR Fall Project Grant Bridge Funding	2022/01-2023/01	\$100,000
Money, D., Boucoiran, I., Elwood, C., Snelgrove, J., Fell, D., Castillo, E., Poliquin, V., and the CANCOVID-Preg team.	Canadian Surveillance of COVID-19 in Pregnancy: Epidemiology, Maternal, and Infant Outcomes (CANCOVID-Preg)	Canadian Institutes of Health Research Operating Grant	2021/12-2022/12	\$499,920
Money, D., Boucoiran, I., Elwood, C., Snelgrove, J., Fell, D., Castillo, E., Poliquin, V., and the CANCOVID-Preg team.	Canadian Surveillance of COVID-19 in Pregnancy: Epidemiology, Maternal, and Infant Outcomes (CANCOVID-Preg)	Public Health Agency of Canada	2021/11-2023/03	\$2,291,560

Boucoiran, I., Gantt, S. McClymont, E., Soudeyns, H., Money, D., Cote, H., Kakkar, F.,Albert, A., Sauve, L., Diallo, A., Boppana, S.	CMV Dynamics and Transmission in Pregnancy: Comparison Between Women Living With and Without HIV.	National Institutes of Health R21	2021/09-2023/08	\$380,824
Money, D., McClymont, E., Elwood, C., Albert, A., Walmsley, S., Smaill, F., Yudin, M., Hankins, C., Singer, J., Ogilvie, G., Loutfy, M., Stone, S., Harris, M., Lee, M., Krajden, M., Hill, J., Sadarangani, M., Poliquin, V.	A Study of Reduced Dosing of the Nonavalent HPV Vaccine in Women Living with HIV (The NOVA-HIV Study)	CIHR Spring Grant Bridge Funding	2021/07-2022/06	\$100,000
Barrett, J., Agarwal, G., Alvarez, E., Boamah, S., Castillo, E., D'Souza, R., Darling, E., Dunn, J., Iorio, A., Alton, G., Apatu, E., Bisnaire, L., Bogler, T., Cook, J., Dube, E., El-Chaar, D., Ellis, S., Fadel, S., Fell, D., Katherine, W., Kuret, V., Lavis, J., MacDonald, S., Malhame, I., Poliquin, V., Schwartz, L., Scott, H., Sprague, A.E., Sussman, D., Thabane, L., Walker, M., Yudin, M., DeFrance, B., Downey, B., Money, D., Schoenfeld, E., Vohra-Miller, S., Wolfe, S.	Encouraging vaccine confidence among pregnant and breastfeeding Canadians.	Encouraging vaccine confidence in Canada Spring 2021 Competition	2021/06-2022/06	\$50,000

Boucoiran, I., Gantt, S., Cote, H., Albert, A., Abdoulaye, D., Elwood, C., Kakkar, F., McClymont, E., Money, D., Sauve, L., Soudeyns, H.	CMV Dynamics and Transmission in Pregnancy: Comparison Between Women Living with and without HIV	Canadian Institutes of Health Research Project Grant	2021/04-2025/03	\$707,624
Money, D., Albert, A., Kuret, V., Castillo, E., McClymont, E., Saunders, S., Elwood, C., Scott, H., Bogler, T., Murphy-Kaulbeck, L., Fadel, S., Karacabeyli, E.	Canadian COVID-19 Vaccine Registry for Pregnant and Lactating Individuals (COVERED): An Evaluation of Safety, Effectiveness, and Acceptability	Public Health Agency of Canada (PHAC)	2021/04-2023/03	\$796,306
Murray, M., Brophy, J., Côté, H., Elwood, C., Kaida, A., King, E., Logie, C., Loutfy, M., Pick, N., Prior, J., Salters, K., Singer, J., Carter, A., Nicholson, V.	Role of Female Sex Hormones on Aging in Women Living with HIV	Canadian Institutes of Health Research (CIHR)	2020/10-2024/12	\$153,000

Money, D., Antonishyn, N., Beach, L., Boucoiran, I., Bullard, J., Cassell, K., Castillo, E., Charlton, C., Crane, J., Daley, J., de Wet, F., Dionne, K., Doherty, S., Dougan, S., Elwood, C., Fell, D., Forest, JC., Giguere, Y., Hannah, H., Hansen, M., Hatchette, T., Kotaska, A., Krajden, M., Magee, F., Martel, J., Minion, J., Murphy- Kaulbeck, L., Neudorf, C., Poliquin, V., Saunders, S., Scott, H.	Canadian Population Serological Survey Utilizing Antenatal Serum Samples: Phase 1	Public Health Agency of Canada (PHAC)	2020/07- 2023/03	\$4,060,807
Money, D., Elwood, C., McClymont, E., Krajden, M., Sadarangani, M., van Schalkwyk, J., Albert, A., Ting, J., Roberts, A., Joseph, KS., Giesbrecht, E., Sauve, L.	Surveillance of Pregnancy Outcomes of Women with Suspected or Confirmed COVID-19 in British Columbia	BC Women's Health Foundation	2020/04- 2022/04	\$22,500
Murray, M., Brophy, J., Carter, A., Chown, S., Côté, H., Elwood, C., Kaida, A., King, E., Magagula, P., Pick, N., Prior, J., Salters, K., Singer, J.	Hormones and Healthy Aging in Women Living with HIV: A Study By, With and For Community	Canadian Institutes of Health Research (CIHR)	2020/03- 2023/03	\$449,991

Sadarangani, M., Bettinger, J., Elwood, C., Gantt, S., Naus, M., van Schalkwyk, J., Money, D.	PRevention of Infections in the MatErnal- Infant Dyad (PRIMED)	University of British Columbia	2020/02- 2022/06	\$57,645
Cote, H., Boucoiran, I., Robertson, W., Elwood, C., Serghides, L., Girad, S., Money, D.	Placenta mitochondri al dysfunction and preterm birth	Canadian Institutes of Health Research (CIHR)	2017/09- 2022/09	\$1,239,000
Money, D., Hill, J., van Schalkwyk, J., Joseph, KS., Manges, A., Albert, A., Elwood, C., Hutcheon, J., Grabowska, K., Links, M., Mitchell, S., Gantt, S., Hodgson, Z.	Defining the maternal legacy: Does mode of delivery impact the role of the maternal vaginal microbiome in predicting the infant gut microbiome ?	Canadian Institutes of Health Research (CIHR)	2017/05- 2022/05	\$1,411,425
Ogilvie, G., Krajden, M., van Niekerk, D., Money, D., Dobson, S., Coldman, A., Singer, J., Peacock, S., Henry, B., Lee, M., Ceballos, K., Mitchell- Foster, S., Kaida, A., Byamugisha, J., Sekikubo, M.	Integrated Global Control and Prevention of HPV Related Diseases and Cancer	Canadian Institute of Health Research (CIHR)	2015/07- 2022/07	\$387,785

Ogilvie, G., Biryabarema, C., Byamuguisha, J., Christlilaw, J., Coldman, A., Dobson, S., Gilbert, M., Henry, B., Kaida, A., Krajden, M., Lee, M., Lusti- Narasimhan, M., Mclachlin, C., Miller, D., Mitchell-Foster, S., Money, D., Naus, M., Peacock, S., Stuart, J., Pederson, H., Russell, V., Saraiya, M., Seikubo, M., Singer, J., Stuart, G., Van Niekerk, D.	Integrated global control and prevention of HPV related diseases and cancer.	Canadian Institutes of Health Research (CIHR)	2015/07- 2022/06	\$2,714,493
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Invited Presentations		
Invited Speaker: Deborah Money	“Challenges to HCV Linkage and Treatment in Pregnancy”	International Federation of Obstetrics and Gynecology (FIGO) Roundtable Webinar. November 2022.
Invited Speaker: Julie van Schalkwyk	“Syphilis”	Oak Tree Clinic Education Session, BC Women’s Hospital. October 2022.
Invited Speaker: Deborah Money	“The Reproductive Infectious Diseases research program; lessons learned from CANCOVID-Preg.”	UBC and Osaka University Virtual Symposium on Infectious Diseases and Drug Development. October 2022.
Invited Speaker: Deborah Money	“Antenatal Serostudies of COVID-19”	Technical Advisory Committee, Public Health Agency of Canada. July 2022.
Invited Speaker: Elisabeth McClymont	“Canadian Surveillance of COVID-19 in Pregnancy.”	BC Women’s Research Rounds. Vancouver, Canada. July 2022
Plenary Presentation: Deborah Money	“Reproductive Infectious Diseases (RID) Research Program”	SOGC’s Annual Clinical and Scientific Conference. June 2022.
Keynote Speaker: Deborah Money	“Vaginal Microbiome and Reproductive Health”	2nd Having IMPACTT: Advancing Microbiome Research Symposium. June 2022.
Invited Speaker: Elisabeth McClymont	“Cervical Cancer”	UBC OBST 510: Gynecological Pathologies. April 2022.
Invited Speaker: Deborah Money	“COVID during pregnancy: an update”	FIGO global webinar. March 2022.

Invited Speaker: Elisabeth McClymont	“Fetal Ultrasound Signs and Associated Postnatal Outcomes in Congenital CMV Infection”	Centre d’Infectologie Mère-Enfant Research Rounds. March 2022.
Invited Speaker: Deborah Money	“What is the role of the maternal microbiome in setting up the infant's microbiome?”	Through Pregnancy and Beyond, WHRI public event. March 2022.
Invited Speaker: Deborah Money	“Maternal vaginal and fetal gut microbiomes, infectious diseases states and immune correlates”	Scientific Forum at the 42nd Annual Pregnancy Meeting. February 2022.
Invited Speaker: Elisabeth McClymont	“Maternal and Infant Outcomes Following SARS-CoV-2 Infection During Pregnancy”	UBC OBST 506: Seminars in Reproductive Biology. February 2022.
Invited Speakers: Deborah Money, Chelsea Elwood, and Julie van Schalkwyk	“Update on COVID-19 in Pregnancy”	UBC Department of Obstetrics and Gynaecology Grand Rounds, BC Women’s Hospital. January 2022.

Community Presentations		
Interview: Deborah Money	Bivalent vaccines are here: What it means for people who are pregnant	UBC News Q&A. November 2022.
Interview: Deborah Money	Interview on DNA Barcoding	CBC Spark. Interview with David Kattenburg. October 2022.
Interview: Deborah Money	Impact of the maternal microbiome on the infant gut microbiome.	CBC Radio Mini-Documentary Series by David Kattenburg. September 2022.
Interview: Deborah Money	The Risks of Being Pregnant While Infected with COVID-19	Bloomberg News. May 2022.
Radio Interview: Deborah Money	SARS-CoV-2 Infection During Pregnancy	CBC Radio Victoria. May 2022.
Interview: Deborah Money	SARS-CoV-2 Infection During Pregnancy	CBC Edmonton. May 2022.
Interview: Elisabeth McClymont	Catching COVID-19 During Pregnancy Increases the Risk of Hospitalization, Premature Birth: National Study.	UBC News. May 2022.
Interview: Deborah Money	SARS-CoV-2 Infection During Pregnancy.	CTV News Vancouver. May 2022.
Interview: Deborah Money	Association of SARS-CoV-2 Infection During Pregnancy with Maternal and Perinatal Outcomes.	Halifax Examiner. May 2022.
Invited Panelist: Deborah Money	Medical Research Leaders Panel.	BC Women's Health Foundation. Illuminations Luncheon. April 2022.

Interview: Deborah Money	Latest RESEARCH RESULTS on the impact of COVID-19 disease & vaccination on pregnancy and newborns.	Global News Toronto. January 2022.
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Appendix: Our Partners	
The Hill Lab	Dr. Janet Hill, Scott Dos Santos, Champika Fernando, Pashupati Bhandari, Darien Deschner, Divanthika Kularatne, Dhinesh Periyasamy
BC Centre for Disease Control (BCCDC) Laboratory	Dr. Mel Krajden, Dr. Inna Sekirov, Dr. Paul Levett, Citlali Marquez, Tamara Pidduck, Guadalein Tanunliong
CANCOVID-Preg National Team	Dr. Julie van Schalkwyk, Dr. Chelsea Elwood, Dr. Joseph Y. Ting, Dr. Mel Krajden, Dr. Manish Sadarangani, Dr. Gina Ogilvie, Dr. Ashley Roberts, Dr. Ellen Giesbrecht, Dr. Laura Sauvé, Dr. Kathryn Dewar, Dr. Ashley Raeside, Dr. Jeffrey Wong, Dr. Eda Karacabeyli, Christine Wang, Dr. Isabelle Boucoiran, Dr. Suzanne Taillafer, Dr. Fatima Kakkar, Dr. Arnaud Gagneur, Dr. Isabel Fortier, Dr. Natalie Dayan, Dr. Yves Giguère, Dr. Andrea Spence, Dr. Haim Abenheim, Dr. Heather Scott, Janet Slaunwhite, Dr. Lynn Murphy-Kaulbeck, Kathryn Bocking, Gaetane LeBlanc Cormier, Dr. Joan Crane, Dr. Tina Delaney, Dr. Phil Murphy, Andrea Morrissey, Dr. Mark Yudin, Dr. Jon Barrett, Dr. Joel Ray, Dr. John Snelgrove, Dr. Jonathan Zipursky, Dr. Anne Sprague, Dr. Gillian Alton, Dr. Maha Othman, Dr. Ann Kinga Malinowski, Dr. Wendy Whittle, Dr. Greg Ryan, Dr. Deshayne Fell, Dr. Mark Walker, Aderemi Ejiwunmi, Dr. Homer Yang, Dr. Connie Williams, Jackie Hubbard, Dr. JoAnn Harrold, Loretta Webel-Edgar, Aileen Jia, Dr. Prakeshkumar Shah, Dr. Darine El-Chaâr, Dr. Krista Cassell, Dr. Eliana Castillo, Laura Reyes, Dr. Verena (Vreni) Kuret, Dr. Sheila Caddy, Dr. Ayaman Abou Mehrem, Dr. Chloe Joynt, Marcia Bruce, Dr. Jocelyne Martel, Dr. Kristine Mytopher, Dr. George Carson, Dr. Jessica Minion, Dr. Mark Hansen, Dr. Gillian Gibson, Dr. Sara Citron, Dr. Sarah Saunders, Dr. Vanessa Poliquin, Dr. Carla Loeppky, Dr. Kerry Dust, Dr. Heather Watson-Burgess, Joanna McDonald, Dr. Paul Van Caeseele, Dr. Jared Bullard, Dr. Michael Narvey, Dr. Andrew Kotaska, Cornelisse Mette, Rita Finley, Dr. Pascal Michel, Dr. Victoria Edge, Wei Luo, Dr. Marina Salvadori, Dr. Marianna Ofner, Dr. Chantal Nelson, Jay Onysko, Susie Dzakpasu

<p>COVERED National Team</p>	<p>Dr. Andrew Kotaska, Dr. Ann Malinowski, Dr. Eda Karacabeyli, Dr. Heather Scott, Dr. Joan Crane, Dr. Jon Barrett, Dr. Tali Bogler, Dr. Isabelle Boucoiran, Dr. Eliana Castillo, Dr. Verena Kuret, Dr. Manish Sadarangani, Dr. Julie van Schalkyk, Dr. Julie Bettinger, Dr. Krisita Cassell, Dr. Lori Brotto, Dr. John Snelgrove, Dr. Fatima Kakkar, Dr. Paul Levett, Dr. George Carson, Dr. Darine El-Chaâr, Dr. Chelsea Elwood, Dr. Shaza Fadel, Amy Booth, Dr. Rohan D'Souza, Dr. Gina Ogilvie, Dr. Mel Krajden, Dr. Mark Hansen, Dr. Modupe Tunde-Byass, Dr. Tatiana Sotindjo, Dr. Saunders Sarah, Dr. Sarai Racey</p>
<p>Antenatal Serostudies National Team</p>	<p>Dr. Mel Krajden, Dr. Kim McGrail, Dr. Paul Levett, Tamara Pidduck, Dr. Inna Sekirov, Citlali Marquez, Dr. Eliana Castillo, Dr. Carmen Charlton, Dr. Hong Yuan Zhou, Dr. Amy Metcalfe, Kimberly Verhaeghe, Dr. Ran Zhuo, Dr. Sabrina Plitt, Dr. Jocelyne Martel, Dr. Fergall Magee, Dr. Cory Neudorf, Dr. Jessican Minion, Dr. Nick Antonishyn, Dr. Amanda Lang, Dr. Deshayne Fell, Dr. Darine El-Chaâr, Dr. Shelly Bolotin, Dr. Vanessa Tran, Julie Perry, Shelley Dougan, Kaamel Hafizi, Dr. Isabelle Boucoiran, Dr. Suzanne Taillefer, Dr. Jean-Claude Forest, Dr. Yves Giguère, Dr. Catherine Hankins, Dr. Guy Boivin, Dr. Emilie Vallières, Dr. Christian Renaud, Marie-Eve Hamelin, Dr. Heather Scott, Dr. Glenn Patriquin, Dr. Lori Beach, Dr. Lynn Murphy-Kaulbeck, Dr. Gabriel Girouard, Gaetane LeBlanc Cormier, Kathryn Bocking, Dr. Vanessa Poliquin, Dr. Jared Bullard, Dr. Joan Crane, Dr. George Zahariadis, Phil Murphy, Andrea Morrissey, Donnette O'Brien, Dr. Tina Delaney, Dr. Krista Cassell, Dr. Jason Robinson, Dr. Kristen Mead, Dr. Marguerite Cameron, Dr. Sarah Saunders, Laura Hillier, Dr. Andrew Kotaska, Dr. Heather Hannah, Jennifer Daley, Dr. Mark Hansen, Dr. Sean Doherty, Dr. François de Wet, Kim Dionne</p>