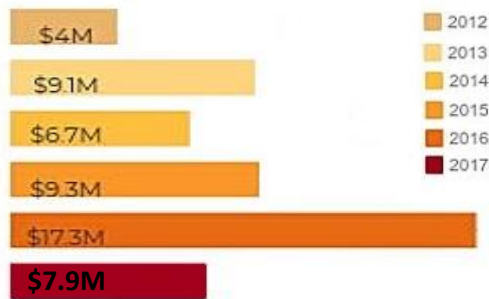


DREAM THEME ANNUAL REPORT – 2017 EXECUTIVE SUMMARY

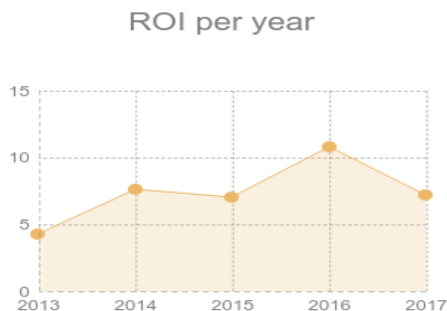
Theme Mission: To improve the health of children with diabetes by making clinically relevant discoveries that will serve as the foundation for strategies to improve diagnosis, prevention and management of complications related to obesity and diabetes.

New Funding 2017

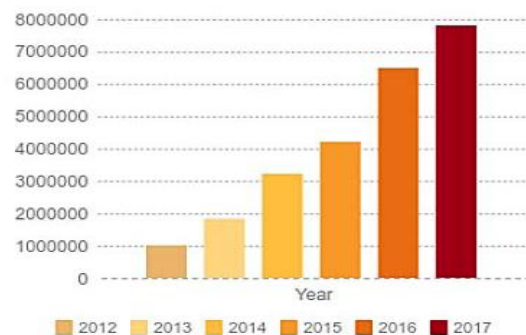


Return on Investment (ROI)

Average ROI per year (2012-2017): 6.87%



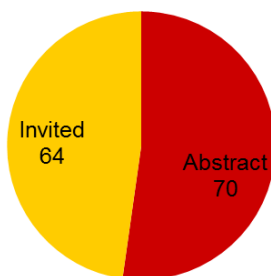
Annual funding (new and continuing)



Productivity

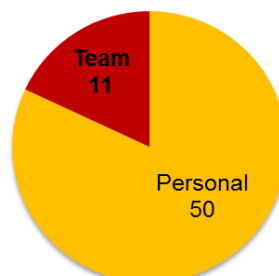
Presentations

Total: 133

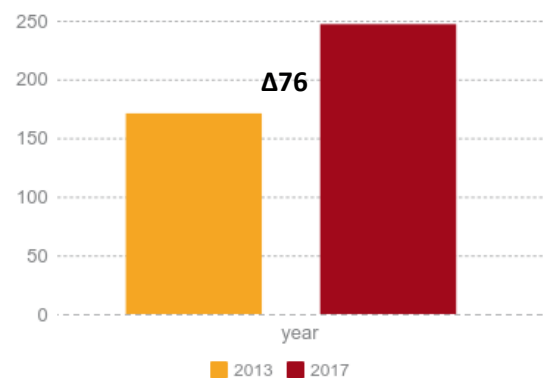


Publications

Total: 61



H-index scores



Networking/Collaboration:

Maintained links with major 4 diabetes networks

- ABC – Western Canadian Islet Biology
- CMDO – Quebec CVD/Diabetes Network
- Canadian Diabetes Association
- Diabetes Action Canada

2017 Annual Report

1. Name of Theme/Cluster/Research Group

DREAM – Diabetes Research Envisioned and Accomplished in Manitoba

2. Group Leader and Members

Co-Leads:

Grant Hatch PhD - Pharmacology & Therapeutics, Biochemistry & Medical Genetics

Jon McGavock PhD - Pediatrics and Child Health

Members:

Meghan Azad PhD - Pediatrics and Child Health

Allison Dart MD - Pediatric Nephrologist

Jim Davie PhD - Biochemistry and Medical Genetics

Vern Dolinsky PhD - Pharmacology & Therapeutics

Christine Doucette PhD - Physiology

Paul Fernyhough PhD - Pharmacology / Neurodegenerative Diseases

Joe Gordon PhD - Faculty of Nursing / Human Anatomy and Cell Science

Elizabeth Sellers MD - Pediatric Endocrinologist

Geert t'Jong MD - Academic Pediatrician and Clinical Pharmacologist

Brandy Wicklow MD - Pediatric Endocrinologist



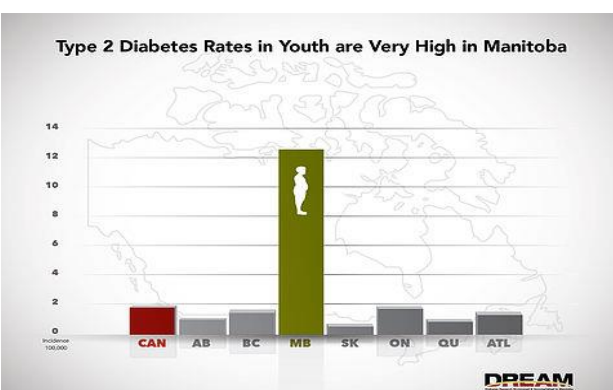
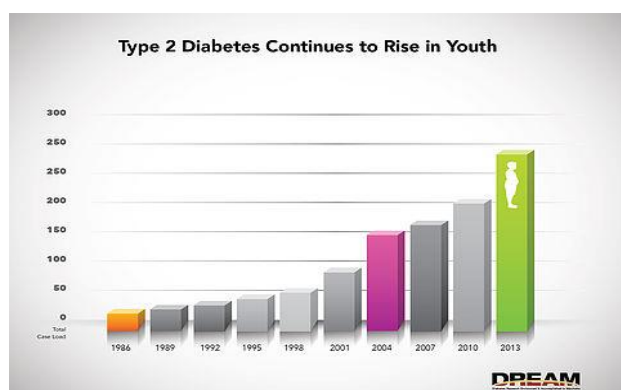
Photo from 2016 DREAM symposium

3. Goals of the Program:

The DREAM theme emerged from the vision of the inaugural director of CHRIM (at that time MICH), Dr. Malcolm Ogborn. The research institute had a very successful theme focused on the Biology of Breathing (BoB) led by Dr. Andrew Halayko. The board wanted to build on this success and create a research theme focused on obesity and type 2 diabetes in youth. At the time, Dr Heather Dean and Dr Elizabeth Sellers were performing clinical research on the large patient population of children with type 2 diabetes that were being seen at the Children's Hospital. Several key observations made by these pioneering clinician scientists paved the way for the primary research questions that would guide the theme.

These included:

1. The observation that rates of type 2 diabetes in children were ~12-fold higher in Manitoba than other provinces.
2. Children with type 2 diabetes went on to develop serious complications early in adulthood including amputations, kidney disease and premature death.
3. Youth with type 2 diabetes were commonly exposed to diabetes throughout their entire fetal development.



After months of consultations with key individuals and several team meetings, a meeting took place at Dr. Heather Dean's farm to determine the core pillars of research for the theme. The clinicians felt that the theme should be patient oriented and focus on questions that would be relevant to the patients and families suffering from type 2 diabetes in Manitoba:

1. Why are we developing type 2 diabetes at a younger age with each new generation?
2. What can we do to prevent my grandchildren from developing type 2 diabetes?
3. Why do we (my child) develop kidney disease and other complications so quickly after being diagnosed with type 2 diabetes?

Since our inception in 2012, the team has secured over \$50 million in external funding, published over 200 scientific articles, including a special series on type 2 diabetes and secured three large team grants to expand our work. Importantly, we are leading the way in Patient-Oriented Research with patient and Indigenous stakeholder advisory groups. The discoveries made to date have helped improve care and our understanding of the inheritance of type 2 diabetes and its complications.

4. Major Achievements

Individual successes



TEAM UPDATE 2017



Team successes

- Increased linkages with diabetes and SPOR networks
- Increased levels of ongoing funding for the group
- Increased numbers of personnel awards held by group members
- Increased numbers of trainees supervised

Trainee successes

Brittany Moyce, PhD candidate

- Faculty of Graduate Studies Travel award – Experimental Biology 2017
- Manitoba Medical Services Foundation Poster Award at MBSHR Poster Competition
- DoHaD Trainee Travel award – CNPRM 2017, Experimental Biology 2017
- Silver Poster Award – Canadian Student Health Research Forum National Competition
- Gold award – trainee oral presentations, DREAM Symposium

Stephanie Kereliuk, PhD candidate

- Research Manitoba PhD Studentship
- Keystone Symposia Scholarship for travel to the Keystone Symposium.
- Agilent-Seahorse Travel Award for travel to the Keystone Symposium.
- Faculty of Graduate Studies Student Travel Award, University of Manitoba, for a Spring 2017 National Conference
- Department of Pharmacology and Therapeutics Student Travel Award, University of Manitoba, for a Winter 2017 North American Conference
- DEVOTION Travel Award, Awarded to trainees with accepted abstracts to attend the Inaugural Meeting of the Canadian DOHaD Society and the Canadian National Perinatal Research Meeting

Gabriel Brawerman, MSc candidate

- Research Manitoba MSc Studentship
- Gold Award – Graduate Student (MSc) Poster Competition at CHRD
- Silver Award at DREAM Symposium Poster Competition
- University of Manitoba Employees Scholarship

Taylor Morriveau, MSc candidate

- Canada Graduate Scholarship-CIHR.
- PIKE-Net Graduate Studentship Award.
- Arthur V. Mauro Senior Student Award.
- Indigenous Student Award of Excellence.
- CHRIM Travel Award for travel to Diabetes Canada 20th Professional Conference

Prasoon Agarwal, post-doctoral fellow

- Research Manitoba postdoctoral fellowship
- Heinz Bohnet Travel Award
- Bronze Award – Postdoctoral Fellow Poster Competition at CHRD

Nicole Weins, undergraduate (Medicine)

- CHRD Goodbear's Den 2nd place

Shirin Moossavi, PhD (Medical Microbiology)

- Research Manitoba PhD Studentship (\$42,000)

Sazida Jahan, PhD

- MHRC/CHRM/CCMF studentship

Veronica Lau, MSc.

- TFRI Rising Star Studentship

Ifeoluwa Adewumi, MSc.

- Research Manitoba studentship (RIOH)

Fadumo Osman, MSc.

- Research Manitoba studentship (CHRM & RIOH)
- Awarded Graduate Enhancement of Tri-Council Stipends

Afroza Parvin, MSc.

- Awarded Graduate Enhancement of Tri-Council Stipends

Laetitia Guillemette, PhD

- CIHR funding

Nika Korpeshe, MSc.

- Completed site target for E-Paradigm Trial

Martin Senechal, former PostDoc

- Published first 2 papers from his Post Doctoral Fellowship as a new PI at UNB

Youstina Soliman, Undergraduate

- Awarded an NSERC undergraduate research award

Nivedita Seshadri, PhD

- Selected to present at the Edge of Science seminar series – University of Manitoba
- Awarded the Janice Dodd Award for Excellence in Endocrine Research (Department of Physiology and Pathophysiology)

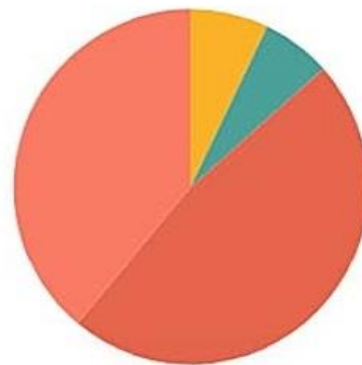
5. Research Funding

- a) Funding to date: Continuing funding (\$39,688,687) + new funding (\$7,887,883) = **\$47,566,570**
 b) Total funding awarded in 2017: **\$7,877,883**
 c) Membership research budget 2017: \$250,000.00 **ROI 2017: 7.14%**

Where Does This Money Go?



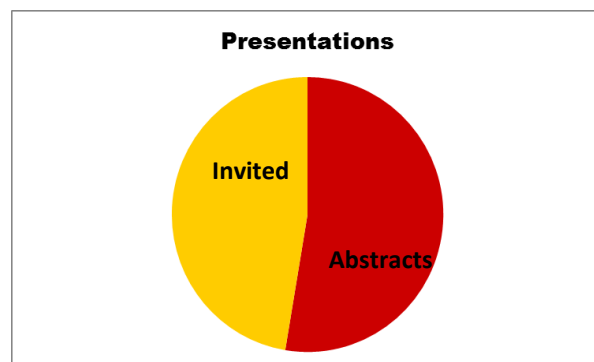
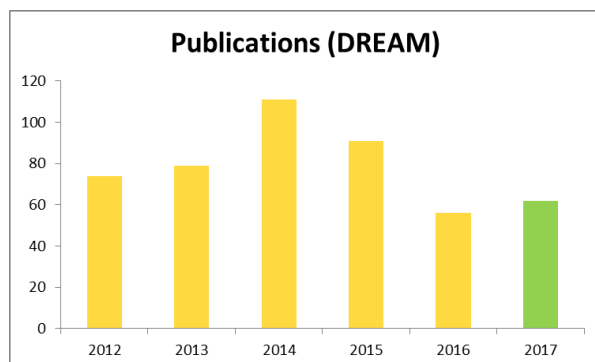
Budget Breakdown 2018



- Meetings
- Other
- Staff
- Basic Support

6. Publications

- a) **61** total peer-reviewed articles published by members of DREAM in 2017
 b) Total presentations 2017: **133** (Invited presentations 64, Abstract presentations 70)



7. Collaborations



DREAM has 3 main subgroups of study which have all had recent funding success and involve collaboration and networking with other Universities. Please see Appendix C for a visual representation.

COMPLICATIONS

Understanding complications that occur with type 2 diabetes.

The iCARE study (improving renal complications in adolescents with type 2 diabetes through research) has recently received funding from SPOR/CIHR and is expanding across 8 other Canadian sites.

- University of British Columbia
- University of Calgary
- University of Alberta
- McMaster University
- University of Toronto/SickKids
- University of Ottawa/CHEO
- McGill University
- Dalhousie University/IKW

DOHaD

The Developmental Origins of Health and Disease.

The EGCD project received funding from CIHR and aims to do translational work between bench and practice by utilizing multiple cohorts.

iCARE – national study

- University of Manitoba (national site)
- Additional sites listed under complications section

NextGen – local study

- University of Manitoba

CHILD – national study

- University of British Columbia
- University of Alberta
- University of Manitoba
- University of Toronto
- McMaster University (national site)

Gen3G

- University of Sherbrooke
- Harvard Medical School

INTERVENTIONS

Research projects implementing studies to try and prevent type 2 diabetes.

The AYP (aboriginal youth mentorship program) has recently received funding from SPOR/CIHR & CDA and is expanding across 4 other Canadian sites.

- University of Alberta
- Laurentian University
- University of Saskatchewan
- Queens University

APPENDIX A: List of Research Funding and Contracts

Highlighted = funding starting in 2017

Member	Agency	Amount	Duration	Funding/yr	Grant Type
Azad, PI	CRC: U of M	\$500,000	2017-2022	\$100,000	Chair
Azad, PI	DEVOTION	\$4,995	2017-2018	\$4,995	Catalyst Seed
Azad, PI	CIHR	\$75,000	2017-2018	\$75,000	Operating
Azad, PI	U of M / CHRIM	\$150,000	2017-2020	\$50,000	Startup Fund
Azad, PI	Research Manitoba	\$225,000	2016-2019	\$75,000	Operating
Azad, Co-A	CIHR	\$4,165,000	2016-2021	\$833,000	Team/Programmatic
Azad, Co-I	CIHR	\$2,000,000	2016-2020	\$500,000	Programmatic
Azad, Co-I	CIHR	\$2,000,000	2016-2020	\$500,000	Programmatic
Azad, Co-I	Prolacta Bioscience + In-Kind + CHRF	\$210,000	2016-2018	\$105,000	Operating
Azad, Co-I	CIHR	\$1,000,000	2015-2020	\$200,000	Operating
Azad, PI	Heart & Stroke	\$150,000	2015-2018	\$50,000	Operating
Azad, Co-I	Research MB	\$1,000,000	2015-2019	\$250,000	Team
Dart, PI	CIHR	\$2,000,000	2016-2021	\$400,000	Operating
Dart, Project Lead	SPOR (CIHR) CHRIM Research Manitoba	\$301,293 \$125,000 \$200,000	2016-2021	\$125,000	Can-SOLVE-CKD SPOR
Dart/Wicklow, PI Sellers, McGavock Co-I	CIHR	\$881,609	2015-2020	\$176,321	Operating
Dart, Co-I	CIHR	\$541,900	2015-2020	\$108,380	Operating
Davie, PI	DEVOTION	\$20,000	2017-2018	\$20,000	Catalyst
Davie, PI	MB IEM/FASD	\$9,000	2016-2017	\$9,000	Sub fund
Davie, PI	NSERC	\$29,000	2016-2017	\$29,000	Operating
Davie, PI	CSR	\$120,000	2015-2017	\$60,000	Operating
Davie, PI	CRC	\$1,400,000	2011-2018	\$200,000	Operating
Davie, PI	CIHR	\$1,372,800	2014-2017	\$457,600	Team
Davie, PI	MICH	\$300,000	2012-2017	\$60,000	Operating
Davie, PI	U of M	\$300,000	2012-2017	\$60,000	Core platform
Dolinsky	MMSF	\$150,000	2017-2020	\$50,000	Salary support
Dolinsky, PI	MMSF	\$20,000	2017-2018	\$20,000	Operating
Dolinsky, PI Davie, Gordon, Wicklow, Co-I	DEVOTION - Catalyst Grant	\$20,000	2016-2017	\$20,000	Catalyst
Dolinsky, PI Davie, Wicklow, Co-PI Azad, Dart, Doucette, Gordon, Hatch McGavock, Sellers, Wittmeier, Co-I	CIHR	\$2,000,000	2016-2020	\$500,000	Programmatic
Dolinsky, PI	HSFC	\$287,702	2016-2019	\$95,900	Operating
Dolinsky, PI	Diabetes Fdn.	\$45,000	2014-2017	\$15,000	Operating
Doucette	Diabetes Fdn of MB	\$120,000	2017-2021	\$40,000	Fellowship
Doucette, PI	NSERC	\$140,000	2015-2020	\$28,000	Discovery
Doucette/Dolinsky	CIHR	\$503,599	2014-2019	\$100,719	Operating
Doucette, PI	MHRC	\$225,000	2015-2018	\$75,000	Operating
Doucette, PI	MICH	\$60,000	2012-2017	\$12,000	Establishment
WinSanTor Biosciences Inc / Fernyhough	NIH Commercialization Readiness Program	\$997,000 USD (\$1,244,604CD)	2017-2018	\$997,000 USD (\$1,244,604CDN)	Industry

	(CRP)	N)			
WinSanTor Biosciences Inc / Fernyhough	NIH STTR program to fund studies in CIPN	\$298,550 USD (\$372,694CDN)	2017-2018	\$298,550 USD (\$372,694CDN)	Industry
Fernyhough, Co-PI	CIHR	\$25,000,000 \$500,000 (personally)	2016-2020 2016-2018 (personally)	\$5,000,000 \$250,000 (personally)	SPOR
Fernyhough, PI	CIHR	\$943,639	2013-2018	\$188,728	Operating
Fernyhough, Co- I	NIHR	\$1,785,000	2013-2018	\$357,000	Operating
Fernyhough, Co-I	CIHR	\$611,905	2013-2018	\$122,381	Operating
Gordon, Co-I	DEVOTION	\$20,000	2017-2018	\$20,000	Catalyst
Gordon, Co-I	CHRM	\$40,000	2017-2018	\$40,000	Operating
Gordon, Co-I	U of M	\$25,000	2017-2018	\$25,000	Collaborative Research Program
Gordon, PI	NSERC	\$160,000	2013-2017	\$40,000	Discovery
Hatch, PI	Heart & Stroke	\$298,336	2017-2020	\$99,455	Operating
Hatch, PI	CRC	\$1,400,000	2013-2020	\$200,000	Operating
Hatch, PI	NSERC	\$170,000	2014-2019	\$34,000	Discovery
Hatch, PI	HSFC	\$266,795	2014-2017	\$88,931	Operating
Hatch/McGavock, Co-PI	CHRM	\$750,000	2015-2018	\$250,000	Theme Funding
McGavock, Co-A	CIHR	\$997,682	2017-2022	\$199,536	Indigenous Mentorship Network
McGavock, PI	HSFC	\$250,000	2017-2020	\$83,333	Operating
McGavock, PA	CIHR	\$100,000	2017-2018	\$100,000	Bridge funding
McGavock, Co-A	CIHR/SPOR	\$24,999	2017-2018	\$24,999	Collaborating
McGavock, PI Sellers, Wicklow, Co-I	CIHR	\$900,000	2016-2019	\$300,000	Operating
McGavock, Co-A	CIHR – Total Personal	\$25,000,000 \$1,100,000	2016-2021	\$5,000,000 \$220,000	SPOR
McGavock, PI	CIHR	\$1,000,000	2014-2019	\$200,000	Research Chair
McGavock, PI	AB Innovates	\$3,200,000	2014-2019	\$640,000	Operating
McGavock, PI	CIHR	\$455,000	2014-2017	\$151,667	Operating
Sellers, Co-I	CHRM	\$40,000	2017-2018	\$40,000	Operating
Sellers, PI Wicklow, Co-I	Public Health Agency of Canada	\$80,000	2016-2018	\$40,000	Operating
Sellers, PI	Manitoba Health	\$400,000	2016-2017	\$400,000	Operating
Sellers, PI Wicklow, Co-I	DEVOTION	\$20,000	2016-2017	\$20,000	Sub-Grant: Pop. Health Pillar
t'Jong, PI	CIHR	\$2,999,998	2017-2020	\$999,999	Operating
t'Jong, PI	CHRM	\$39,445	2016-2017	\$39,445	Operating
t'Jong, PI	CHRM (KIDSCAN)	\$100,000	2016-2017	\$100,000	Operating
Wicklow, PI	CIHR	\$424,575	2017-2020	\$141,525	Operating
Wicklow, PI Sellers, Co-A	Research Manitoba	\$40,000	2016-2017	\$40,000	Operating
Wicklow, Co-I	CIHR	\$455,000	2014-2017	\$151,666	Operating
All DREAM Investigators	Research Manitoba (DEVOTION)	\$2,500,000	2015-2020	\$500,000	Collaborative Cluster
All DREAM Investigators	Lawson Fdn. (DEVOTION)	\$1,200,000	2015-2020	\$240,000	Team
TOTAL (new2017)		\$7,877,883		\$3,751,878	
TOTAL (all current)		\$47,566,883		\$18,369,878	

APPENDIX B: List of Publications

1. Publications (highlighted = > 1 DREAM member as an author)

61 total publications → 11 with > 1 DREAM member (underlined authors = trainees)

1. Chan D, Goruk S, Becker AB, Subbarao P, Mandhane P, Turvey S, Lefebvre D, Sears M, CHILD Study Investigators ., Field C, and **AZAD MB***. Adiponectin, leptin and insulin in breastmilk: associations with maternal characteristics and infant body composition in the first year of life. *International Journal of Obesity* Aug 2017. Doi: 10.1038/ijo.2017.189
2. Klopp A, Vehling L, Becker AB, Mandhane P, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators and **AZAD MB***. Modes of Infant Feeding and the Risk of Childhood Asthma: A Prospective Birth Cohort Study *Journal of Pediatrics* 2017 190:192-199.e2. doi: 10.1016/j.jpeds.2017.07.012
3. Pitt TJ, Becker AB, Chan-Yeung M, Chan ES, Watson W, Chooniedass R, **AZAD MB***. Reduced risk of peanut sensitization following exposure through breast-feeding and early peanut introduction. *Journal of Allergy and Clinical Immunology* Aug 2017. S0091-6749(17)31104-1. doi: 10.1016/j.jaci.2017.06.024
4. Tran M, Lefebvre DL, Dai D, **AZAD MB**, Subbarao P, Lou W, Becker AB, Mandhane PJ, Turvey SE, Sears MR, and the CHILD Study investigators. Timing of food introduction and development of food sensitization in a prospective birth cohort. *Pediatric Allergy and Immunology* Aug 2017. 28(5):471-477. doi: 10.1111/pai.12739
5. **AZAD MB**, Abou-setta AM, Chauhan BF, Rabbani R, Lys J, Copstein L, Mann A, Jeyaraman MM, Reid AE, Fiander M, MacKay DS, **McGavock J**, **Wicklow B**, Zarychanski R. Non-nutritive sweeteners and cardio-metabolic health: A systematic review and meta-analysis of randomized controlled trials and prospective cohort studies. *Canadian Medical Association Journal* 2017. 189(28) doi: 10.1503/cmaj.161390
6. **AZAD MB**, Vehling L, Zihang L, Dai D, Subbarao P, Becker AB, Mandhane PJ, Turvey SE, Lefebvre DL, Sears MR and the CHILD Study Investigators. Breastfeeding, maternal asthma and wheezing in the first year of life: a prospective longitudinal birth cohort study. *European Respiratory Journal* 2017. 49(5)
7. Bridgman SL, **AZAD MB**, Field CJ, Haqq AM, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Sears MR, Scott JA, Wishart DS, Kozyrskyj AL, and the CHILD Study Investigators. Fecal short-chain fatty acid variations by breastfeeding status in infants at 4 months: differences in relative versus absolute concentrations. *Frontiers in Nutrition* 2017. 4:11 doi: 10.3389/fnut.2017.00011
8. Qasem W, **AZAD MB**, Hossain Z, Jorgensen S, Castillo San Juan S, Cai C, Khafipour E, Beta T, Friel J. Assessment of complementary feeding of Canadian infants: effects of iron-rich foods on iron status, gut microbiota and oxidative stress markers. *BMC Pediatrics* 2017. 14;17(1):54
9. Halipchuk J, Temple B, **Dart AB**, Martin D, **Sellers EA**. Prenatal, obstetrical and perinatal factors associated with the development of childhood-onset type 2 diabetes. *Canadian Journal of Diabetes* 2017
10. Samuel SM, Flynn R, Zappitelli M, **Dart A**, Parekh R, Pinsk M, Mammen C, Wade A, Scott SD, for the Canadian Childhood Nephrotic Syndrome Project Team. Factors influencing practice

variation in the management of nephrotic syndrome: a qualitative study of pediatric nephrology care providers. *CMAJ Open* 2017. 5(2): E424-430.

11. Ferguson, TW, Tangri N, Tan Z, James MT, Lavallee BDA, Chartrand CD, McLeod LL, **Dart AB**, Rigatto C, Komenda PVJ. Screening for chronic kidney disease in Canadian Indigenous peoples is costeffective. *Kidney International* 2017. 92(1): 192-200.
12. Savant JD, Betoko A, Meyers KEC, Mitsnefes M, Flynn JT, Townsend RR, Greenbaum LA, **Dart A**, Warady B, Furth SL. Vascular stiffness in children with chronic kidney disease. *Hypertension* 2017. 69(5): 863-869.
13. **Dart AB**, Zappitelli M, Sood M, Alexander RT, Arora S, Erickson R., Kroeker K, Soo A, Manns BJ, Samuel SM. Variation in estimated glomerular filtration rate at dialysis initiation in children. *Pediatric Nephrology* 2017. 32(2): 331-340.
14. Palermo J, **Dart AB**, De Mello A, Devarajan P, Gottesman R, Garcia Guerra G, Hansen G, Joffe AR, Mammen C, Majesic N, Morgan C, Skippen P, Pizzi M, Palijan A, Zappitelli M. Biomarkers for early acute kidney injury diagnosis and severity prediction: a pilot multicentre Canadian study of children admitted to the ICU. *Pediatric Critical Care Medicine* 2017, epub 2017 Apr 20.
15. Whitlock R, Chartier M, Komenda P, Hingwala J, Rigatto C, Walld R, **Dart A**, Tangri N. (2017). Validation of the kidney failure risk equation in Manitoba. *Canadian Journal of Kidney Health and Disease* 2017.
16. **Dart AB**, Lavallee B, Chartrand C, McLeod L, Ferguson T, Tangri N, Gordon A, Blydt-Hansen T, Rigatto C, Komenda P. Screening for kidney disease in Indigenous Canadian Children: the FINISHED Screen, Triage and Treat Program. *Paediatric Child Health* 2017.
17. Chong LSH, Sautenet B, Tong A, Hanson CS, Samuel S, Zappitelli M, **Dart A**, Furth S, Eddy AA, Groothoff J, Webb NJA, Yap HK, Bockenbauer D, Sinha A, Alexander SI, Goldstein SL, Gipson DS, Raman G, Craig JC. Range and heterogeneity of outcomes in randomized trials of pediatric chronic kidney disease. *Journal of Pediatrics* 2017.
18. **Dart AB**. Diabetic nephropathy: reason for cautious optimism. *Diabetes Communicator* 2017.
19. **Dart A**, Komenda P, Tangri N. Time to Implement the Kidney Failure Risk Equation Into Pediatric Practice. *JAMA Pediatr.* 2017 Dec 18.
20. **McGavock J**, Durksen A, **Wicklow B**, Malik S, **Sellers EA**, Blydt-Hansen T, Chateau D, **Dart A**. Determinants of readiness for adopting healthy lifestyle behaviours among Indigenous adolescents with type 2 diabetes: A cross sectional study. *Obesity*. 2017. Revision Requested.
21. Xu W, Jia G, Cai N, Huang S, **Davie JR**, Pitz M, Banerji S, and Murphy L. A 16 Yin Yang Gene Expression Ratio Signature for ER+/Node- Breast Cancer. *Int J Cancer* 2017. 140(6): 1413-1424
22. Lau V and **Davie JR**. The discovery and development of the CRISPR system in applications in genome manipulation. *Biochem Cell Biol.* 2017. Published on the web 28 October 2016, 10.1139/bcb-2016-0159
23. Khan DH, Healy S, He S, Lichtensztejn D, Klewes L, Sharma KL, Lau V, Mai S, Delcuve GP and **Davie JR**. Mitogen-induced distinct epi-alleles are phosphorylated at with H3S10 or H3S28 depending on H3K27 acetylation. *Mol Biol Cell* 2017. 28(6): 817-824

24. Jahan S, Sun JH, He S and **Davie JR**. Transcription-dependent association of HDAC2 with active chromatin. *J Cell Physiol* 2017. 233 (2), 1650-1657.
25. Ilic A, Lu S, Bhatia V, Begum F, Klonisch T, Agarwal P, Xu W and **Davie JR**. Ubiquitin C-terminal hydrolase isozyme L1 is associated with shelterin complex at interstitial telomeric sites. *Epigenetics Chromatin* 2017. 10 (1): 54
26. Seshadri N, Jonasson ME, Hunt KL, Xiang B, Cooper S, Wheeler MB, **DOLINSKY VW** and **Doucette CA**. Uncoupling protein 2 (UCP2) regulates daily rhythms of glucosestimulated insulin secretion: A physiological role for UCP2 in the pancreatic β cell. *Mol. Metab.* 2017. 6:760-769.
27. Kereliuk SM, Brawerman GM and **DOLINSKY VW**. Maternal macronutrient excess and the developmental origins of metabolic disease in the offspring. *Int. J. Mol. Sci.* 2017. 18:E1451.
28. Youssef N, Campbell S, Barr A, Gandhi M, Hunter B, **DOLINSKY V**, Dyck JRB, Clanachan AS and Light PE. Hearts lacking plasma-membrane KATP channels display changes in basal aerobic metabolic substrate preference and AMPK activity. *Am. J. Physiol. Heart Circ. Physiol.* 2017. 313: H469-478.
29. Agarwal, P., Morriseau, T.S., Kereliuk, S.M., **Doucette, C.A.**, **Wicklow, B.A.** and **DOLINSKY V.W.** Maternal obesity, diabetes during pregnancy and epigenetic mechanisms that influence the developmental origins of cardiometabolic disease in the offspring. *Crit. Rev. Clin. Lab Sci.* (2017) In press.
30. **DOLINSKY VW**. The role of sirtuins in mitochondrial function and doxorubicin-induced cardiac dysfunction. *Biol. Chem.* 2017. 398:955-974.
31. Vuong B, Odero G, Rozbacher S, Stevenson M, Kereliuk SM, Pereira TJ, **DOLINSKY VW**, and Kauppinen TM. Exposure to gestational diabetes mellitus induces neuroinflammation, derangement in hippocampal neurons and cognitive changes in rat offspring. *J. Neuroinflamm.* 2017. 14:80.
32. **Azad MB**, Moyce BL, Guillemette L, Pascoe CD, **Wicklow B**, **McGavock JM**, Halayko AJ and **DOLINSKY VW**. Maternal diabetes and children's lung health: developmental origins of respiratory disease. *Ped. Resp. Rev.* 2017. 21:19-26.
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Selective antagonism of muscarinic receptors is neuroprotective in peripheral neuropathy. *Journal of Clinical Investigation* 2017. 127, 608-622.

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46. Chang W, Chen L, and **HATCH GM**. Berberine inhibits oxygen consumption rate independent of alterations in cardiolipin metabolism in H9c2 cells. *Lipids* 2017. 52(11), 961-967.
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48. Rioux B, Kuwornu P, Sharma A, Tremblay MS, **McGavock J**, Senechal M. Association Between Handgrip Muscle Strength and Cardio-Metabolic Z-Score in Children 6 to 19 Years of Age: Results from the Canadian Health Measures Survey". *Metabolic Syndrome and Related Disorders* 2017. 15: 379-384.

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54. **McGavock J**, **Wicklow B**, **Dart A**. Type 2 Diabetes in youth is a disease of poverty. *The Lancet* 2017. 390(10105): 1829.
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58. Khaper T, Bunge M, Clark I, Rafay M, Mhanni A, Kiroauc N, Sharma A, Rodd C, **Wicklow B**. Increasing incidence of optic nerve hypoplasia/septo-optic dysplasia spectrum: Geographic clustering in Northern Canada. *Paediatrics & Child Health* 2017. 22(8):445-453.
59. Heard J, Morris A, Kiroauc, N, Trepel S, Ducharme J, **Wicklow B**. Gender Dysphoria Assessment and Action for Youth: Review of Healthcare Services and Experiences of Trans Youth in Manitoba. *Paediatrics & Child Health* 2017. p 156
60. Sawatsky L, Halipchuk J, **Wicklow B**. Type 2 Diabetes in a 4 year old child. *CMAJ* 2017. 4;189(26) 888-890 PMID 28676579
61. Durst MA, **Wicklow B**, Narvey M. Atypical case of preterm ovarian hyperstimulation syndrome. *BMJ Case Reports* 2017. PMID 28228430

2. Presentations

AZAD

Invited presentations

- 11/21/17 Are Fake Sugars Contributing to the Obesity Epidemic? Early-life Exposures to Non-Nutritive Sweeteners and Cardio-metabolic Health. *Alberta Children's Hospital Institute*. Edmonton, AB.
- 11/9/17 Impact of early life environments on the gut microbiota *The Gut Microbiome in Human Biology and Health: New Opportunities for the Study of Health Disparities - Human Capital and Economic Opportunity Global Working Group*. Chicago, ILL.
- 09/21/17 Infant Gut Microbiota Webinar *Parenting Science Gang*. Balmaclellan, UK.
- 07/20/17 Breastfeeding, human milk bioactives, and developmental origins of chronic disease in the CHILD cohort
FASEB Scientific Research Conference: Origins and Benefits of Biologically Active Components in Human Milk. Lisbon, Portugal.
- 06/2017 Can breastfeeding protect babies from asthma? New results and current research from the CHILD Study
Manitoba Baby Friendly Committee. Winnipeg, MB
- 10/11/17 Perinatal exposures, breastfeeding and the gut microbiome: Implications for lifelong health
GOLD Perinatal Online Conference
- 05/17/17 Breastfeeding, Human Milk Composition and the Infant Gut Microbiome: Implications for Lifelong Health
University of Toronto
- 05/19/17 Are fake sugars contributing to the childhood obesity epidemic? Prenatal and early-life exposure to non-nutritive sweeteners and metabolic health
Oregon Nutrition Day. Portland, OR.
- 04/27/17 Developmental origins of asthma: breastfeeding, milk composition and maternal factors
Canadian Respiratory Conference. Montreal, QC.
- 03/06/17 Breastfeeding, breast milk composition and the developmental origins of health and disease in the CHILD birth cohort
Larsson-Rosenquist Foundation Mother-Milk-Infant Centre of Research Excellence Seminar. San Diego, CA.
- 03/05/17 Perinatal exposures, infant microbiota and lifelong health
California Association of Neonatologists. San Diego, CA.
- 02/15/17 Breastfeeding, human milk composition and the infant gut microbiome
Canadian National Perinatal Research Meeting. Montebello, QC.
- 02/14/17 DOHaD and human milk: can breastfeeding program lifelong health?
DOHaD Canada Annual Meeting. Montebello, QC.
- 01/12/17 Breastmilk, Bottle Feeding, Foods and Formula: Infant feeding and asthma development in the CHILD Study
Canadian Respiratory Research Network Annual General Meeting. Ottawa, ON.

Media Interviews

- 09/2017 Study shows eating peanuts while breastfeeding may reduce risk of allergies – CBC News
- 07/2017 Artificial Sweeteners Are Linked to Weight Gain—Not Weight Loss – *TIME*
- 07/2017 Low-Calorie Sweeteners May Contribute to Weight Gain— *Consumer Reports*

- 07/2017 Why caution may be warranted when consuming artificial sweeteners – *CBC News*
- 07/2017 Sugar substitutes associated with weight gain and health problems, study says – *Globe & Mail*
- 07/2017 Artificial Sweeteners Don't Help People Lose Weight, Review Finds – *NPR (National Public Radio)*
- 07/2017 Study links artificial sweeteners and weight gain – *CTV News*
- 07/2017 HOW SWEET IT ISN'T: Can a mom's intake of artificial sweeteners while pregnant make her child obese? – *Science News*
- 05/2017 Babies who are breastfed longer are less likely to wheeze – *CTV News*
- 05/2017 More breastfeeding, less wheezing: Year-long study finds breastfed babies reap rewards – *CBC News*
- 04/2017 'Like' or 'dislike'? Instagram Users' Attitudes Towards Breastfeeding – *University of Alberta*
- 02/2017 Researching Chronic Disease (TMPLR Study) – *CTV Morning Live*

Abstracts

AZAD MB*, Vehling L, Klopp A, Nickel NC, **McGavock JM**, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators. Breastfeeding and infant body mass index: associations differ according to method of milk feeding and type of complementary nutrition. (10/2017) *World Congress of DOHaD*. Rotterdam, The Netherlands.

Moossavi S, Khafipour E, Sepehri S, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators, and **AZAD MB***. Human milk microbiota in the Canadian Healthy Infant Longitudinal Development (CHILD) cohort. (06/2017) *Canadian Society of Microbiologists 67th Annual Conference*. Waterloo, ON.

Moossavi S, Khafipour E, Sepehri S, Robertson B, Bode L, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators, and **AZAD MB***. Maternal and early-life factors influencing human milk microbiota in the CHILD Cohort. (06/2017) *Canadian Society of Microbiologists 67th Annual Conference*. Waterloo, ON.

Robertson B, Bode L, Sharma AK, Becker AB, Mandhane P, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators and **AZAD MB***. Maternal Factors and Human Milk Oligosaccharide Composition in the CHILD Cohort. (04/2017) *American Society for Nutrition at Experimental Biology 2017*. Chicago, IL. The FASEB Journal 31:650.36

AZAD MB*, Robertson B, Sharma AK, Becker AB, Mandhane P, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators and Bode L. Human Milk Oligosaccharides and Food Sensitization at 12 months in the CHILD Cohort. (04/2017) *American Society for Nutrition at Experimental Biology 2017*. Chicago, IL. The FASEB Journal 31(1):448.2

► *Selected for oral presentation*

La M, Vehling L, Dunne L, and **AZAD MB**. Stakeholder Engagement to Inform Strategies for Improving Breastfeeding Education in Manitoba Schools. (10/2017). *Children's Hospital Research Institute of Manitoba Child Health Research Day*. Winnipeg, MB.

Wiens N, Mackay D, Jones P, Blewett H, TMPLR Study Investigators, **McGavock J** and **AZAD MB**. Childhood and Adult Socioeconomic Status and the Development of Type 2 Diabetes Risk Factors in

the TMPLR Cohort. (10/2017). *Children's Hospital Research Institute of Manitoba Child Health Research Day*. Winnipeg, MB.

- ▶ Selected for Oral Presentation at Dr. Goodbear's Den
- ▶ Awarded 2nd place

Archibald A, Sharma AK, de Souza RJ, **Dolinsky VW**, Becker AB, Mandhane PJ, Turvey SE, Subbarao P, Lefebvre DL, Sears MR, the CHILD Study investigators, and **AZAD MB**. Prenatal and early-life exposure to non-nutritive sweeteners and body composition at 3 years of age in the CHILD cohort. (10/2017). *Children's Hospital Research Institute of Manitoba Child Health Research Day*. Winnipeg, MB.

Miliku K, Bode L, Robertson B, Sharma AK, Subbarao P, Becker AB, Mandhane PJ, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators and **AZAD MB**. Human milk oligosaccharides and food sensitization among infants in the CHILD Study. (10/2017). *Children's Hospital Research Institute of Manitoba Child Health Research Day*. Winnipeg, MB.

- ▶ Selected for Oral Presentation at Dr. Goodbear's Den

Moosavi S, Khafipour E, Sepehri S, Robertson B, Bode L, Field CJ, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Lefebvre DL, Sears MR, the CHILD Study Investigators, and **AZAD MB***. Structural Equation Modeling of Determinants of Human Milk Microbiota in the Canadian Healthy Infant Longitudinal Development (CHILD) Cohort. (06/2017) *Canadian Statistics Student Conference*. Winnipeg, MB.

DART

Invited presentations:

- | | |
|------|---|
| 2017 | Living with Youth Onset Type 2 Diabetes; Teachings from Patients and Clinical Cohorts. 13 th Annual Child Health Research Days "Pathways to Equity: Better Health for All Children", Winnipeg, Canada |
| 2017 | Jackie McGee, patient partner. (2017). A biopsychosocial approach to complications in youth with type 2 diabetes. Webinar - Diabetes Canada, Canada |
| 2017 | CKD in Children in Manitoba. A Discussion About Screening: The Who, The How and the What Next. Pediatric Bi-Weekly Discussion Series, University of Manitoba, Winnipeg, Canada |
| 2017 | Paul Komenda. Kidney Disease and First Nations Extent of the Problem. Nanaandawewigamig – First Nations Health & Social Secretariat of Manitoba, Diabetes Integration Project, Foot Care and Chronic Disease Workshop, Winnipeg, Canada |

Abstracts

Jabar F, **Wicklow B**, **McGavock J**, **Sellers E**, Blydt-Hansen T, Sharma A, Chateau D, **Dart A**. An Evaluation of Progression and Regression of Albuminuria in Youth with Type 2 Diabetes. (11/2017) *Diabetes Canada/CSEM Professional Conference*. Edmonton, AB.

Slaght J, Picard F, **McGavock J**, **Wicklow B**, **Dolinsky V**, **Dart A**. IGFBP-2 is associated with type 2 diabetes and measures of renal health in youth. (11/2017) *Diabetes Canada/CSEM Professional Conference*. Edmonton, AB.

Guillemette L, Dart A, Wicklow B, Dolinsky V, Jassal D, Sellers E, Duhamel T, McGavock J. Diabetes in Pregnancy Exposure, Diastolic Function and Mitochondrial Markers in Adolescents with Type 2 Diabetes. (11/2017) *Diabetes Canada/CSEM Professional Conference*. Edmonton, AB.

Guillemette L, Dart A, Dolinsky V, Jassal D, Sellers E, McGavock J. Exposure to diabetes in utero impairs cardiac relaxation in youth with type 2 diabetes. (10/2017).
11th Annual Child Health Research Day, CHRIM.

DAVIE

Invited presentations:

- 3/2017 Keynote Speaker, Alberta Epigenetics Network, Lethbridge, Alberta.
- 5/2017 11th Annual Canadian Neuroscience Meeting, Montreal, Quebec.
- 6/2017 GeXc symposium, Winnipeg, Manitoba.

Abstracts

Does not keep record of abstract presentations.

DOLINSKY

Invited presentations:

- 10/2017 Gestational diabetes and sex differences in the cardiometabolic health of the offspring. *Canadian Society of Exercise Physiology Meeting*, Winnipeg, MB.
- 10/2017 Type 2 diabetes in children: does it have a developmental origin? *Children's Hospital Research Institute of Manitoba Child Health Research Days*, Winnipeg, MB.
- 08/2017 Type 2 diabetes in children: does it have a developmental origin? *Bridging discovery research with therapies meeting*, Banff, AB.
- 05/2017 Gestational diabetes and the fetal programming of metabolic function: mechanisms and interventions. *Children's Hospital Research Institute of Manitoba Research Rounds*, Winnipeg, MB.
- 04/2017 Gestational diabetes and the fetal programming of metabolic function: mechanisms and interventions. *American Society of Pharmacology and Experimental Therapeutics Symposium on Perinatal Therapeutics and the Programming of Adult Cardiometabolic Disease at Experimental Biology*. Chicago, IL.

Abstracts

Morriseau T, Brar N, Agarwal P, Fonseca MA, Kereliuk SM, Cole LK, Xiang B, Hatch GM, Doucette CA and DOLINSKY VW. Gestational diabetes mellitus exposure and postnatal diet influence pancreatic islet function of the rat offspring. (11/2017) *Diabetes Canada Annual Conference*. Edmonton, AB.

Agarwal P, Wicklow BA, Dart AB, Sellers E, Xu W, Davie JR and DOLINSKY VW. Methylation of genes in adolescents with type 2 diabetes is associated with exposure to maternal

diabetes during pregnancy. (10/2017). *Child Health Research Day, CHRIM*. Winnipeg, MB.

Brawerman G, Kereliuk SM, Pereira TJ, Xiang B, Fonseca MA and **DOLINSKY VW**. Resveratrol supplementation improves maternal glucose tolerance and prevents gestational diabetes induced cardiometabolic disease development in the rat offspring. (10/2017). *Child Health Research Day, CHRIM*. Winnipeg, MB.

Moyce BL, Cole LK, Xiang B, Fonseca MA, **Doucette CA**, **Hatch GM** and **DOLINSKY VW**. Altered hepatic fatty acid and mitochondrial metabolism contributes to the development of gestational diabetes mellitus in pregnant adiponectin deficient mice. (10/2017). *Child Health Research Day, CHRIM*. Winnipeg, MB.

► *Selected for Oral Presentation at Dr. Goodbear's Den*

Kereliuk SM, Cheung KG, Agarwal P, Cole LK, Xiang B, Fonseca MA, **Hatch GM**, **McGavock J** and **DOLINSKY VW**. Early life exposure to gestational diabetes mellitus alters mitochondrial bioenergetics and cardiac function in rat offspring. (10/2017). *Child Health Research Day, CHRIM*. Winnipeg, MB.

Sellers EA, **Dart AB**, **Wicklow BA**, Blydt-Hansen T, Chateau D, **DOLINSKY VW**, Guillemette L and **McGavock JM**. Is albuminuria associated with increased left ventricular dysfunction and increased metabolic risk in youth with type 2 diabetes? An iCARE cohort study. (6/2017) *The American Diabetes Association Meeting*. San Diego, CA.

Senechal M, Rioux BV, Cody P, Kimberley D, Moffatt TL, Duhamel TH, **DOLINSKY VW** and **McGavock JM**. Irisin is associated with insulin sensitivity improvement following an exercise training in obese youth. (5/2017) *The American College of Sports Medicine Meeting*. Denver, CO.

Kereliuk SM, Cheung KG, Xiang B, Cole LK, Fonseca MA, **Hatch GM**, **McGavock J** and **DOLINSKY VW**. Early life exposure to gestational diabetes impairs mitochondrial bioenergetics and cardiac function in the rat offspring. (5/2017) *The Keystone Symposia: Mitochondria, Metabolism and the Heart*. Santa Fe, NM.

► *Awarded Keystone Symposia Scholarship Travel Award*

Moyce BL, Cole LK, Xiang B, Fonseca MA, **Doucette CA**, **Hatch GM** and **DOLINSKY VW**. Altered fatty acid and mitochondrial metabolism in the liver of pregnant adiponectin deficient mice contributes to insulin resistance and gestational diabetes mellitus. (4/2017) *Experimental Biology Meeting*. Chicago, IL.

Kereliuk SM, Cheung KG, Xiang B, Cole LK, Fonseca MA, **Hatch GM**, **McGavock J** and **DOLINSKY VW**. Early life exposure to gestational diabetes impairs mitochondrial bioenergetics and cardiac function in the rat offspring. (2/2017) *The Canadian National Perinatal Research Meeting*. Montebello, QC.

Moyce BL, Cole LK, Xiang B, Fonseca MA, **Doucette CA**, **Hatch GM** and **DOLINSKY VW**. Altered fatty acid and mitochondrial metabolism in the liver of pregnant adiponectin deficient mice contributes to insulin resistance and gestational diabetes mellitus. (2/2017) *The Canadian National Perinatal Research Meeting*. Montebello, QC.

► *Selected for Oral Presentation*

DOUCETTE

Invited presentations:

- 2017 The HNF-1aG319S variant and youth-onset type 2 diabetes: How is beta cell function affected?, *Diabetes Canada Scientific Sessions*, Edmonton, Alberta, Canada.
- 2017 What is Diabetes and How can Stem Cells Help?, *Stem Cell Talks Calgary*, University of Calgary, Calgary, Alberta, Canada.
 - *Keynote Speaker*
- 2017 The HNF-1aG319S variant and youth-onset type 2 diabetes: How is beta cell function affected? *University of Calgary, Regenerative Medicine Seminar Series*, Calgary, Alberta, Canada.
- 2017 The HNF-1aG319S variant and youth-onset type 2 diabetes: How is beta cell function affected? *Alberta-BC Islet Workshop*, Vernon, British Columbia, Canada.

Abstracts

Seshadri N, Jonasson ME, Flett T, Hunt K, Xiang B, Dolinsky VW, Doucette CA. The circadian clock regulates rhythmic expression of Ucp2 in beta cells and controls daily cycles of insulin secretion. (11/2017) *Diabetes Canada Annual Conference*. Edmonton, AB.

Flett TN, Hunt K, Fonseca MA, Nian C, Wicklow BA, Sellers E, Agarwal P, Dolinsky VW, Lynn, FC and Doucette CA. Investigating the impact of the HNF-1aG319S polymorphism on pancreatic beta cell function. (6/2017) *The American Diabetes Association Meeting*. San Diego, CA.

► *Selected for moderated poster presentation*

Seshadri N, Jonasson ME, Flett TN, Hunt KL, Xiang B, Dolinsky VW and DOUCETTE CA. UCP2 expression is rhythmic in pancreatic β cells and contributes to the control of daily cycles of insulin secretion and glucose tolerance. (2/17) *Albert-BC Islet Workshop*, Silver Star Resort, British Columbia, Canada.

► *Selected for an oral presentation*

FERNYHOUGH

Invited presentations:

- 10/2017 Muscarinic receptor antagonism to treat diabetic sensory neuropathy. *4th BBDC-Joslin-UCPH Diabetes Conference*, MaRS Centre, Toronto, Canada.

Abstracts

Sabbir MG, Calcutt NA and Fernyhough P. (2017). Muscarinic receptor signaling constrains axonal outgrowth by augmenting dissolution of the cytoskeleton in adult sensory neurons. *Peripheral Nerve Society Biennial Meeting*. Sitges-Barcelona, Spain.

Sabbir MG and Fernyhough P. (2017). Selective muscarinic receptor antagonism activates the ERK/MAPK pathway in adult sensory neurons. *Peripheral Nerve Society Biennial Meeting*.

Sitges-Barcelona, Spain.

Aghanoori MR, Smith DR, Roy Chowdhury S, Sabbir MG, Calcutt NA and **Fernyhough P**. (2017). Insulin prevents aberrant mitochondrial phenotype in sensory neurons of type 1 diabetic rats. *Canadian Association for Neuroscience*. Montreal, QC, Canada.

GORDON

Abstracts

Mughal W, Field J, Martens M, Chapman D, Hai Y, Keijzer R, Rattan S, Dixon I, Huang J, Parmacek MS & **Gordon JW**. Myocardin regulates mitochondrial permeability transition and cell death during cardiac development and heart failure. (11/2017) *DREAM Symposium*, Winnipeg, MB.

► *Selected for moderated poster presentation*

Martens M, Field J, Hai Y, Mughal W, da Silva Rosa S, Blaney C, Ivanco T, Diehl-Jones W, **Gordon JW**. Misoprostol-Induced Activation of NF-κB Functions to Repress the Bnip3 Cell Death Pathway in Neonatal Hypoxia. (11/2017) *DREAM Symposium*, Winnipeg, MB.

da Silva Rosa S, Nguyen L, Chapman C, Hai Y, Rampitsch C, **Dolinsky VW**, **Gordon JW**. Therapeutic Targeting of Skeletal Muscle Nix in Early-Onset Insulin Resistance. (11/2017) *DREAM Symposium*, Winnipeg, MB.

► *1st place in moderated poster presentation*

Rezaei Moghadam A, Alizadeh J, Field J, da Silva Rosa S, **Gordon JW**, Ghavami S. Role of autophagy in temozolomide-induced apoptosis in Rhabdomyosarcoma cells. (10/2017) *Child Health Research Day*, Winnipeg, MB.

Mughal W, Field J, Martens M, Chapman D, Hai Y, Keijzer R, Rattan S, Dixon I, Huang J, Parmacek MS, & **Gordon JW**. Myocardin regulates mitochondrial permeability transition and cell death during cardiac development and heart failure. (10/2017) *Child Health Research Day*, Winnipeg, MB.

Martens M, Field J, Hai Y, Mughal W, da Silva Rosa S, Blaney C, Ivanco T, Diehl-Jones W, **Gordon JW**. Misoprostol-Induced Activation of NF-κB Functions to Repress the Bnip3 Cell Death Pathway in Neonatal Hypoxia. (10/2017) *Child Health Research Day*, Winnipeg, MB.

da Silva Rosa S, Nguyen L, Chapman C, Hai Y, Rampitsch C, **Dolinsky VW**, **Gordon JW**. Therapeutic Targeting of Skeletal Muscle Nix in Early-Onset Insulin Resistance. (10/2017) *Child Health Research Day*, Winnipeg, MB.

Rezaei Moghadam A, Alizadeh J, Field J, da Silva Rosa S, **Gordon JW**, Ghavami S. The controlling role of Autophagy in regulating temozolomide-induced apoptosis in Rhabdomyosarcoma cells. (6/2017) *Canadian Student Health Research Forum*, Winnipeg, MB.

Mughal W, Field J, Martens M, Chapman D, Hai Y, Keijzer R, Rattan S, Dixon I, Huang J, Parmacek MS & **Gordon JW**. Myocardin regulates mitochondrial permeability transition and cell death during cardiac development and heart failure. (6/2017) *Canadian Student Health Research Forum*, Winnipeg, MB.

Martens M, Field J, Hai Y, Mughal W, da Silva Rosa S, Blaney C, Ivanco T, Diehl-Jones W,

Gordon JW. Misoprostol-Induced Activation of NF- κ B Functions to Repress the Bnip3 Cell Death Pathway in Neonatal Hypoxia. (6/2017) *Canadian Student Health Research Forum*, Winnipeg, MB.

da Silva Rosa S, Nguyen L, Chapman C, Hai Y, Rampitsch C, **Dolinsky VW**, **Gordon JW**. Therapeutic Targeting of Skeletal Muscle Nix in Early-Onset Insulin Resistance. (6/2017) *Canadian Student Health Research Forum*, Winnipeg, MB.

Rezaei Moghadam A, Alizadeh J, Field J, da Silva Rosa S, **Gordon JW**, Ghavami S. The controlling role of Autophagy in regulating temozolomide-induced apoptosis in Rhabdomyosarcoma cells. (5/2017) *CancerCare Manitoba Research Day*, Winnipeg, MB.

Gordon JW, Mughal W, Field J, Hai Y, Chapman D, Keijzer R, Rattan S, Dixon IM, Huang J, Parmacek MS. Myocardin regulates mitochondrial calcium homeostasis and prevents permeability transition in cardiac myocytes. (4/2017) *Experimental Biology*, Chicago, Illinois, USA.

Martens M, Field J, Hai Y, Mughal W, da Silva Rosa S, Blaney C, Ivanco T, Diehl-Jones W, **Gordon JW**. Misoprostol-Induced Activation of NF- κ B Functions to Repress the Bnip3 Cell Death Pathway in Neonatal Hypoxia. (4/2017) *Experimental Biology*, Chicago, Illinois, USA.

Field F, Martens M, Mughal W, da Silva Rosa S, **Gordon JW**, Diehl-Jones W. NF- κ B Promotes Alternative Splicing of Bnip3 During the Cellular Adaptation to Hypoxia. (4/2017) *Experimental Biology*, Chicago, Illinois, USA.

da Silva Rosa S, Nguyen L, Chapman C., Hai Y, Rampitsch C, **Dolinsky VW**, **Gordon JW**. Therapeutic Targeting of Skeletal Muscle Nix in Early-Onset Insulin Resistance. (4/2017) *Experimental Biology*, Chicago, Illinois, USA.

Rezaei Moghadam A, Alizadeh J, Field J, da Silva Rosa S, **Gordon JW**, Ghavami S. Role of autophagy in temozolomide-induced apoptosis in Rhabdomyosarcoma cells. (4/2017) *Experimental Biology*, Chicago, Illinois, USA.

Mughal W, Field J, Martens M, Chapman D, Hai Y, Keijzer R, Rattan S, Dixon I, Huang J, Parmacek MS & **Gordon JW**. Myocardin regulates mitochondrial permeability transition and cell death during cardiac development and heart failure. (3/2017) *Ottawa Heart Conference*, Ottawa, ON.

HATCH

Invited presentations:

- 10/2017 *Child Health Research Day*, Winnipeg, MB
- 8/2017 *Bridging Discovery Research with Therapies*, Banff, AB
- 8/2017 *Gordon Research Conference*, Waterville Valley, NH, USA
- 6/2017 *3rd Annual Northern Great Plains Lipid Conference*, Winnipeg, MB
- 4/2017 *Manitoba Pediatric Health Conference*, Winnipeg, MB
- 3/2017 *Department of Biochemistry and Molecular Biology*, Dalhousie University, St. John, NB

Abstracts

Cole LK, **Doucette CA**, Vandel M, Fonseca MA, Xiang B, **Dolinsky VW**, **Hatch GM**. Altered islet function may promote a lean phenotype in Tafazzin deficient mice. (4/2017) Experimental Biology Meeting. Chicago, IL.

El-Gharbawy A, Wang Y, Seminott B, Sparanga G, Al-Mohsen W, Basu S, **HATCH GM** and Vockley J. (2017) Study of the relationship between fatty acid oxidation, the electron transfer chain and cardiolipin in patients' cells with LCHAD/TFP deficiency and Barth syndrome. Implications for new pathomechanisms and therapeutic targets. (11/2017) *United Mitochondrial Disease Foundation Symposium*. Washington, D.C.

El-Gharbawy A, Wang Y, Seminott B, Sparanga G, Al-Mohsen W, Basu S, Karunanidhi A, **HATCH GM** and Vockley J. Understanding why patients with LCHAD/TFP deficiency have overlapping features with mitochondrial respiratory chain defects. Implications for new therapeutic targets. (9/2017) *13th International Congress of Inborn Errors of Metabolism*, Rio de Janeiro, Brazil.

HATCH GM, Mejia EM, Bouchard ED and Banerji V. Expression Of Human Monolysocardiolipin Acyltransferase-1 Improves Mitochondrial Function In Barth Syndrome Lymphoblasts. (6/2017) *3rd Annual Northern Great Plains Lipids Conference*, Winnipeg, MB.

► Selected for oral presentation

Cole LK, **Doucette C**, Vandel M, Fonseca M, Xiang B, **Dolinsky VW** and **HATCH GM**. Altered islet function may promote a lean phenotype in tafazzin-deficient mice. (6/2017) *3rd Annual Northern Great Plains Lipids Conference*, Winnipeg, MB.

Chang W, Chen L and **HATCH GM**. The anti-diabetic agent berberine inhibits mitochondrial function independent of cardiolipin synthesis. (6/2017) *3rd Annual Northern Great Plains Lipids Conference*, Winnipeg, MB.

Agarwal P, Cole LK, Hauff KD, Ravandi A, **Dolinsky VW** and **HATCH GM**. Phosphokinome analysis of Barth Syndrome lymphoblasts identify novel targets in the pathophysiology of the disease. (6/2017) *3rd Annual Northern Great Plains Lipids Conference*, Winnipeg, MB.

Cole LK, **Doucette C**, Vandel M, Fonseca M, Xiang B, **Dolinsky VW** and **HATCH GM**. Altered islet function may promote a lean phenotype in tafazzin-deficient mice. (7/2017) *Gordon Research Conference*, Waterville Valley, NH, USA.

Cole LK, **Doucette C**, Vandel M, Fonseca M, Xiang B, **Dolinsky VW** and **HATCH GM**. Altered islet function may promote a lean phenotype in tafazzin-deficient mice. (11/2017) 6th Annual DREAM Symposium, Winnipeg, MB.

MCGAVOCK

Invited presentations:

- 4/2017 Preparing your first grant-Great tips from big losers. *CCHCSP Annual Workshop*, Calgary, AB.
- 4/2017 Urban trails and health - Does the built environment improve population health. *Live Active Summit*, Edmonton, AB.

- 5/2017 Rippling to Wellness. The Indigenous Youth Mentorship Program. *Diabetes Action Canada SPOR Indigenous Wellness Workshop*, Toronto, ON.
- 5/2017 Engagement, Relevance and Justice as the Foundation for Child Health Research with Indigenous Communities. *Manitoba Metis Federation Gala*, Winnipeg, MB.
- 6/2017 The Historical Context for Indigenous Health in Canada. *SPOR Can-SOLVE CKD and Diabetes Action Canada Networks Webinar on Indigenous Health Webinar*, Vancouver, BC.
- 2017 Novel approaches to the prevention and treatment of type 2 diabetes in Indigenous youth. *Lifecourse Epidemiology of Adiposity and Diabetes (LEAD) center Rounds University of Colorado at Denver*, Denver, USA.
- 2017 Resilience as the framework for the prevention and management of type 2 diabetes in youth. *First Nations Health and Social Secretariat of Manitoba Foot Conference*, Winnipeg, MB.

Abstracts

Does not keep record of abstract presentations.

SELLERS

Invited presentations:

- 3/2017 Type 2 Diabetes in Indigenous Youth in Manitoba. *Diabetes Coordinators Symposium: the Dakota Ojibway Tribal Council / Aboriginal Diabetes Initiative (Health Canada)*. Winnipeg, MB.
- 3/2017 Type 2 diabetes in youth: a focus on Indigenous populations. *Health Sciences Research Talks: Indigenous Student Centre*. University of Manitoba, Winnipeg, MB.
- 4/2017 Type 2 Diabetes in Indigenous Youth. *Pharmacists Manitoba Conference*, Winnipeg, MB.
- 5/2017 The Cycle of Type 2 Diabetes in Children: implications across the lifespan. *Citywide Endocrine Rounds at the University of Toronto*. Toronto, ONT.
- 5/2017 Type 2 Diabetes in Youth. *Divisional Rounds, Sick Kids, University of Toronto*. Toronto, ONT.

Abstracts

Sellers EAC, Fransoo R, Chateau D, Prior H, Tan A, Chen H, **Wicklow BA**. Gestational and pregestational diabetes exposure in utero: validation of a definition for use in administrative data. (6/2017) *American Diabetes Association 77th Scientific Sessions*. San Diego, CA. *Diabetes* 2017; 66: A646.

Sellers EAC, Fransoo R, Chateau D, Prior H, Tan A, Chen H, **Wicklow B**. Gestational and Pregestational Diabetes Exposure in Utero: Validation of a Definition for Use in Administrative Data. (9/2017) *Pediatric Endocrine Society Annual Meeting*. Washington DC.

Flett TA, Hunt KL, Fonseca M, Nian C, Agarwal P, **Wicklow BA**, **Sellers EAC**, **Dolinsky VW**, Lynn FC, **Doucette CA**. Investigating the impact of the HNF1G319S polymorphism on pancreatic beta cell function. (6/2017) *American Diabetes Association 77th Scientific Sessions*. San Diego, CA. *Diabetes* 2017; 66: A570.

Kesselman R, **Sellers EAC**. Diabetic Ketoacidosis at Presentation of Type 1 Diabetes in

Children. (11/2017) *Diabetes Canada Annual Scientific Meeting*. Edmonton, AB. *Can J Diabetes* 2017; 41: S75`

Hui A, **Wicklow B**, **Sellers E**, **McGavock J**, Nickel N, Ludwig S, Morris M, Wood L, Philips-Beck W, Campbell R, Desjarlais F, Munroe G, Roulette M, Beaulieu D, Kuzdak C, Chen G. Moms in Motion-Social Media-Assisted Prenatal Education Program Increases Participation of Pregnant Women in Prenatal Education in Manitoba First Nation Communities. (11/2017) *Diabetes Canada Annual Scientific Meeting*. Edmonton, AB. *Can J Diabetes* 2017; 41: S15.

T'JONG

Invited presentations:

- 2017 Medical Marijuana. *Pediatric Bi-Weekly Program 2017 2018 (MOCOMP)*, Winnipeg, MB.
- 2017 The Teratogenicity of Anticonvulsants. *Genetics Academic Rounds*, Winnipeg, MB.
- 2017 Pharmacokinetics of Understudied Drugs Administered to Children per Standard of Care. *Pediatric Emergency Room*, Winnipeg, MB.
- 2017 Pediatric Pharmacology. *PA Session*, Winnipeg, MB.
- 2017 New Frontiers in Pediatric Pharmacology Research. *Dr J M Bowman Symposium on Neonatal Research* (Organization Committee), Winnipeg, MB.
- 2017 The Learning Health Care System. *Pediatric Grand Rounds*, Winnipeg, MB.
- 2017 Application of Kinase Inhibitors Outside Pediatric Oncology. *American College of Clinical Pharmacology (ACCP) - 2017 Annual Meeting*, San Diego, USA.
- 2017 Government Initiatives and Perspective – how to Enhance Development of Appropriate Formulation through Legislation and Funding. *AAPS 2017 Annual meeting*, San Diego, USA.
- 2017 Pharmacokinetics of Understudied Drugs Administered to Children per Standard of Care. *Pediatric Anesthesia*, Winnipeg, MB.
- 2017 Pharmacogenomics. *Pharmacogenomics CPNDS Drug Surveillance Program*; Update, Winnipeg, MB.
- 2017 Pharmacogenomics. *Medical Genetics Academic Rounds*, Winnipeg, MB.

WICKLOW

Invited presentations:

- 9/2017 Pediatric Type 2 Diabetes: A Canadian Perspective. *Hospital-wide Grand Rounds, Darwin Hospital*. Darwin, Australia.
- 9/2017 Childhood onset Type 2 Diabetes: Nature, Nurture and the Next Generation. *the Northern Territory & Far North Queensland Diabetes in Pregnancy Partnership- Darwin Research Symposium*. Darwin, Australia.
- *Invited Keynote Lecture*
- 8/2017 Intergenerational impact of Type 2 Diabetes on First nations Families and Communities: Lessons from the Next Generation Canadian Birth Cohort. *2017 Australian Diabetes Society and Australian Diabetes Educators Association Annual Scientific Meeting*. Perth, Australia.

8/2017 Our children are getting obese and type 2 diabetes, what are we doing about it? Panel Discussion. *2017 Australian Diabetes Society and Australian Diabetes Educators Association Annual Scientific Meeting*. Perth, Australia.

Abstracts

Wicklow BA, Sellers EAC, Kroeker K, Sharma AK, Nickel N, Phillips-Beck W, Shen GA. Impact of type 2 diabetes exposure in utero on the development of childhood-onset type 2 diabetes in First Nations and non-First Nations offspring. (6/2017) *American Diabetes Association 77th Scientific Sessions*. San Diego, CA. *Diabetes* 2017; 66: A3.

► *Selected for oral abstract presentation*

Jabar F, Dart AB, McGavock J, Sellers EAC, Blydt-Hansen T, Kroeker K, Chateau D, Wicklow B. Progression and Regression of Albuminuria in Youth with Type 2 Diabetes. (11/2017). *Diabetes Canada Annual Scientific Meeting*. Edmonton, AB. *Can J Diabetes* 2017; 41: S8.

Gabbs M, Dart A, Jabar F, Kroeker K, Blydt-Hansen T, McGavock J, Wicklow B. (2017). Vitamin D Status in Indigenous Youth with Type 2 Diabetes. (11/2017) *Diabetes Canada/CSEM Professional Conference*. Edmonton, AB.

Wicklow B, Sellers E, Dolinsky V, McGavock J, Dart A. Is albuminuria associated with increased left ventricular dysfunction and increased metabolic risk in youth with type 2 diabetes? An iCARE cohort Study. (9/2017) *International Meeting of Pediatric Endocrinology*. Washington, DC.

Guillemette L, Durksen A, Rabbani R, Zarychanski R, Abou-Setta A, Duhamel T, McGavock J, Wicklow B. Intensive Glucose management in gestational Diabetes and Childhood obesity risk: A systematic review and meta-analysis. (2017) *4th Annual Canadian national Perinatal Research Meeting (CNPRM)*. Montebello, Quebec.

Jabbar F, Schneider J, MacDonald C, Sellers EAC, Wicklow B. The Next Generation Study: An update on the biological risk factors for type 2 diabetes in Indigenous Children in Manitoba. (2/2017) *4th Annual Canadian national Perinatal Research Meeting (CNPRM)*. Montebello, Quebec.

Schneider J, Jabbar F, Sellers EAC, Wicklow B. the Next Generation Longitudinal Birth Study: Investigating the Links between maternal Type 2 Diabetes and Infant Health. (2/2017) *4th Annual Canadian national Perinatal Research Meeting (CNPRM)*. Montebello, Quebec.

APPENDIX C: Network Map

