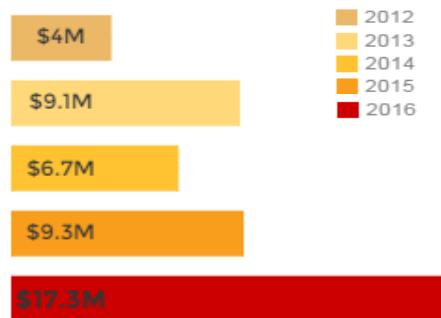


DREAM THEME ANNUAL REPORT – 2016 EXECUTIVE SUMMARY

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 2016



Major Funding Announcements

Can-SOLVE-CKD SPOR

PIs: Dr. Allison Dart & Brandy Wicklow



Chronic Diseases SPOR

PI: Dr. Paul Fernyhough & Jon McGavock

EGCD Team Grant

PI: Dr. Vern Dolinsky






Pathways to Equity Team Grant

PI: Dr. Jon McGavock



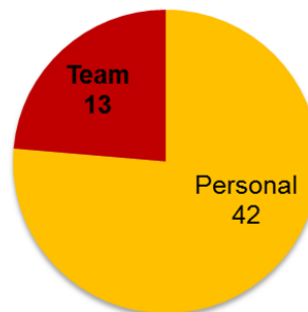
Highlighted Successes

-  New animal model of youth-onset type 2 diabetes
-  New biomarker for type 2 diabetes in youth
-  Patient video from iCARE cohort

Productivity

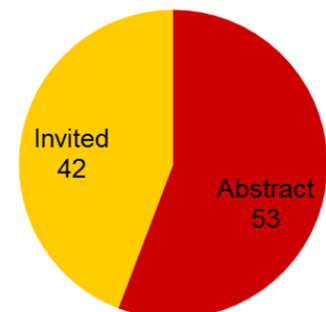
Publications

Total: 55



Presentations

Total: 95



Branding/Networking/Collaboration:



Established links with major 4 diabetes networks

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



New website (www.dreamdiabetesresearch.com)



Social media connections

- DREAM_Diabetes followers increased 3-fold
- DREAM member connections increased 1875 to 3174

2016 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

Kristy Wittmeier PhD - Physiotherapist & Director of Knowledge at CHI



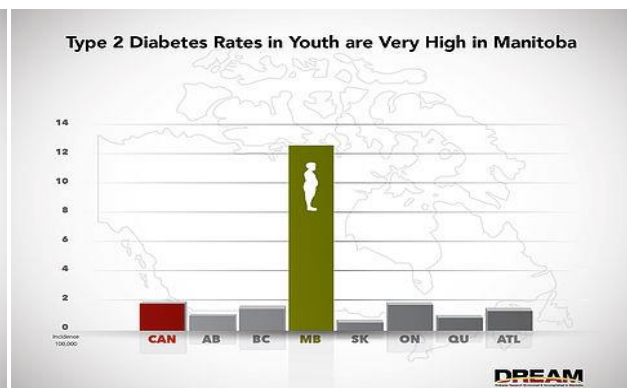
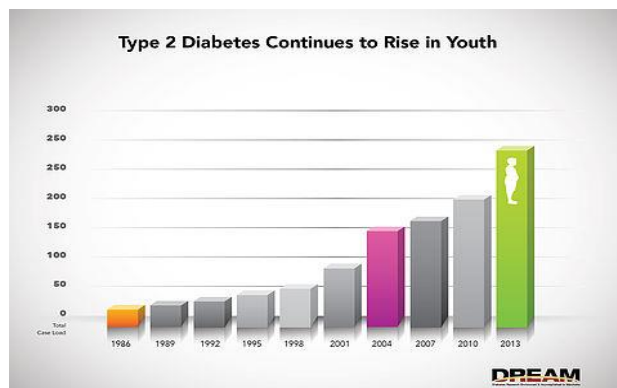
Photo from 2016 DREAM symposium

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.



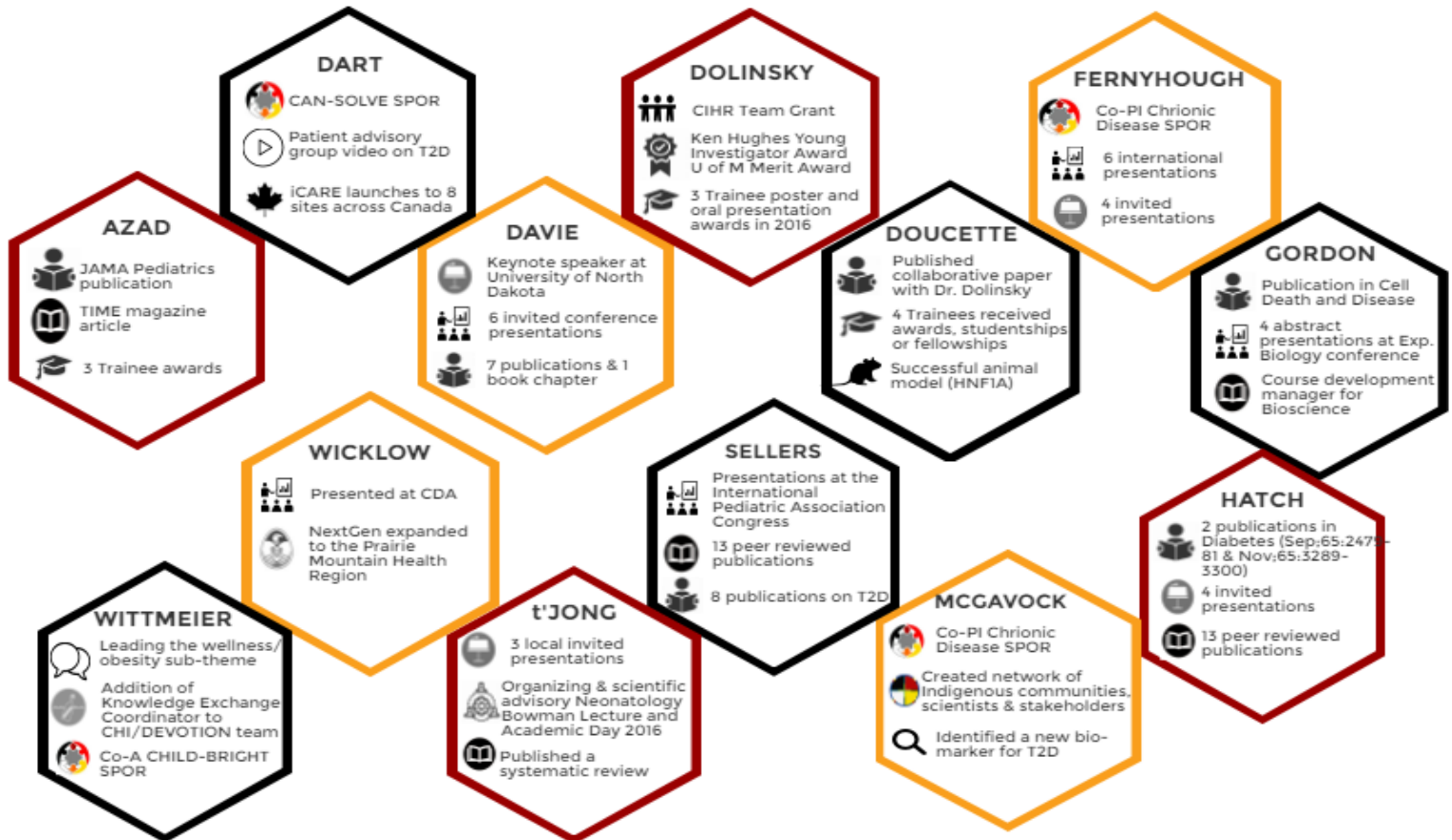
After months of consultations with key individuals and several team meetings, a meeting took place at Dr. Heather Dean's farm to determine the core pillars of research for the theme. The clinicians felt that the theme should be patient oriented and focus on questions that would be relevant to the patients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

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

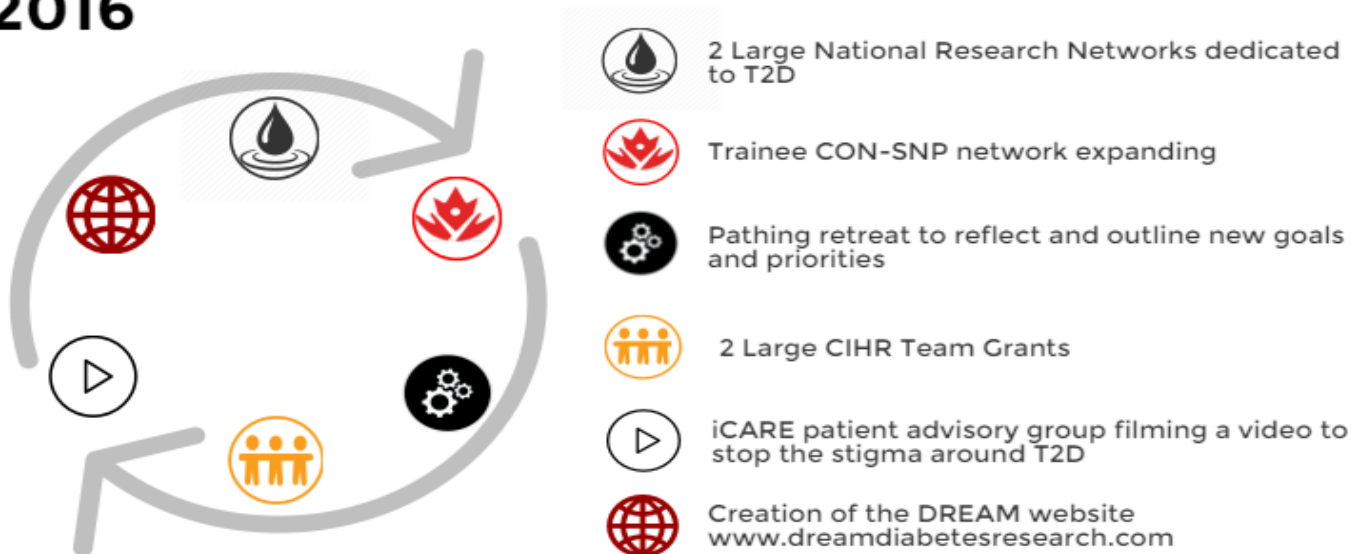
Since our inception in 2012, the team has secured over \$22 in external funding, published over 200 scientific articles, including a special series on type 2 diabetes and secured three large team grants to expand our work. Importantly, we are leading the way in Patient-Oriented Research with patient 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 2016



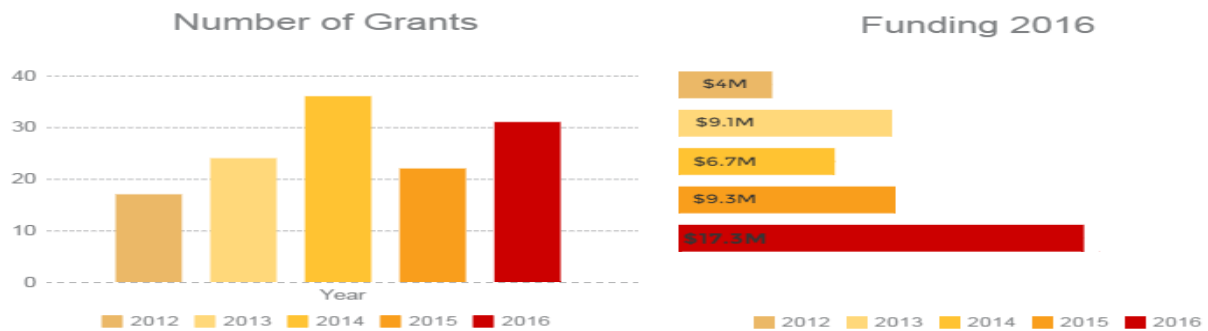
TEAM HIGHLIGHTS 2016



5. Research Funding

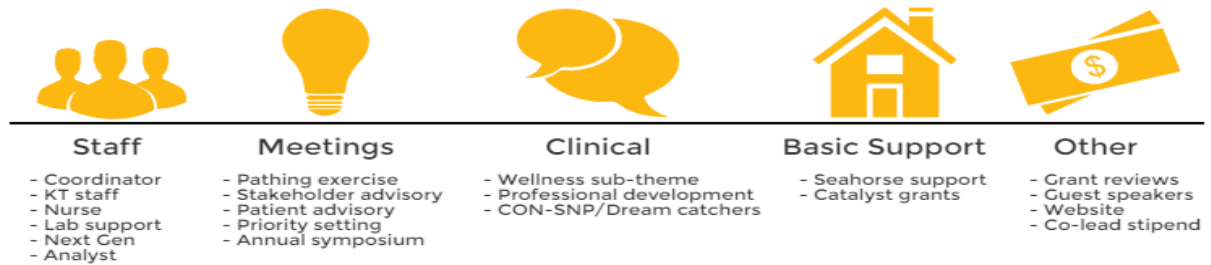
a) Total funding to date: Continuing funding (\$9,241,580) + new funding (\$17,351,001) = **\$26,592,581**

b) Total funding awarded in 2016: **\$17,351,001**

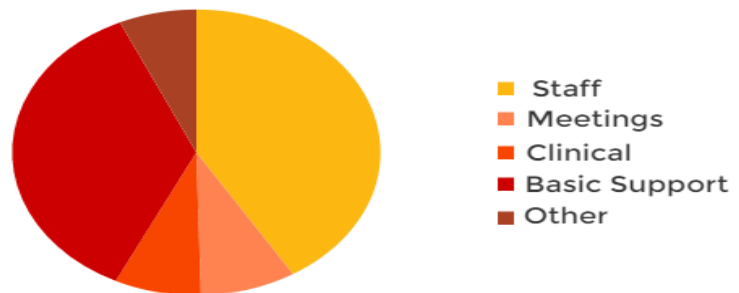


c) Membership research budget 2016: \$250,000.00

Where Does This Money Go?



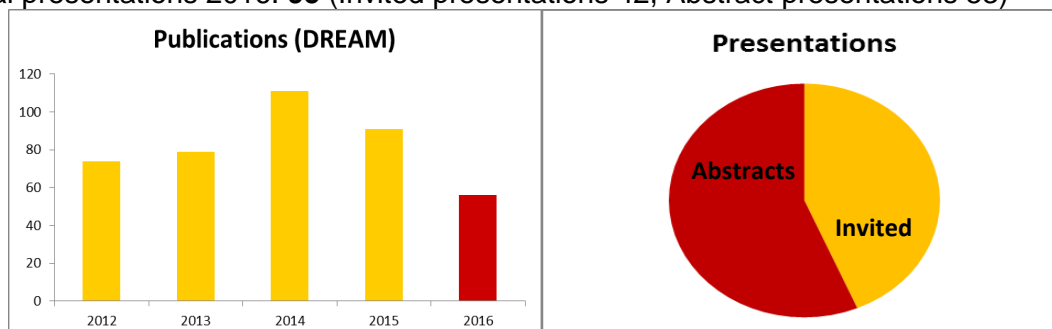
Budget Breakdown 2017



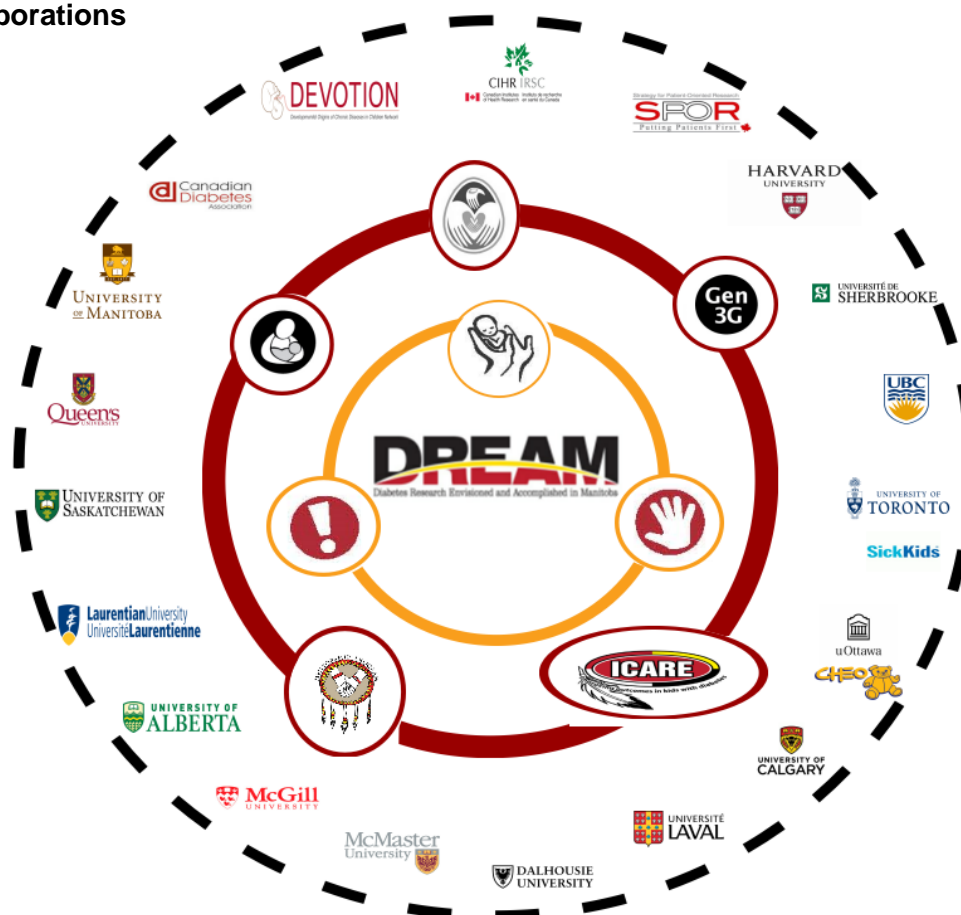
6. Publications

a) **55** total peer-reviewed articles published by members of DREAM in 2016

b) Total presentations 2016: **95** (Invited presentations 42, Abstract presentations 53)



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 D 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 2016

Member	Agency	Amount	Duration	Funding/yr	Grant Type
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 + CHRFB	\$210,000	2016-2018	\$105,000	Operating
Azad, Co-I	CIHR	\$1,000,000	2015-2020	\$200,000	Operating
Azad, PI Dolinsky, Co-I	CHRM	\$40,000	2015-2016	\$40,000	Operating
Azad, PI	Heart & Stroke	\$150,000	2015-2018	\$50,000	Operating
Azad, PI	MMSF& CHRM	\$21,500	2015-2016	\$21,500	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) CHRM 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	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, PI Davie, Gordon, Wicklow, Co-I	DEVOTION - Catalyst Grant	\$20,000	2016-2017	\$20,000	Catalyst
Dolinsky, PI Davie, Wicklow, Co-PI Azad, Gordon, 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, 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 Dolinsky, Co-I	CHRM	\$40,000	2015-2016	\$40,000	Operating
Doucette, PI	MICH	\$60,000	2012-2017	\$12,000	Establishment
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, PI	CHRM	\$40,000	2016	\$40,000	Operating
Gordon, PI	Research Manitoba	\$64,000	2016	\$64,000	Bridge Funding
Gordon, PI	Manitoba Centre for Nursing and Health Research & U of M	\$7,500 + \$16,000	2016	\$23,500	Operating
Gordon, PI	NSERC	\$160,000	2013-2017	\$40,000	Discovery
Gordon, PI	MCNRH	\$7,500	2015-2016	\$7,500	Operating
Gordon, PI Dolinsky, Co-I	Thorlakson	\$30,000	2015-2016	\$30,000	Operating
Hatch, Co-PI	NHLBI & NIH	\$20,000	2016	\$20,000	Operating
Hatch, PI	CHRM	\$39,267	2016	\$39,267	Operating
Hatch, PI	DEVOTION	\$20,000	2016	\$20,000	Catalyst
Hatch, PI	U of M	\$50,000	2016	\$50,000	Strategic Initiative Prgm
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, 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, 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	CHRM	\$39,445	2016-2017	\$39,445	Operating
t'Jong, PI	Rh Institute Fdn	\$15,000	2016-	\$15,000	Operating
t'Jong, PI	CHRM (KIDSCAN)	\$100,000	2016-2017	\$100,000	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
Wicklow, PI	CHF	\$40,000	2015-2016	\$40,000	Operating
Wicklow, PI	CHRM	\$40,000	2015-2016	\$40,000	Operating
Wittmeier, Co-A	CIHR SPOR - Total - Personal	\$25,000,000 \$312,794	2016-2021	\$5,000,000 \$62,559	SPOR
Wittmeier, Co-I	CIHR	\$15,000	2016-2017	\$15,000	Collaboration
Wittmeier, Co-I	CIHR	\$20,000,000	2013-2018	\$4,000,000	SUPPORT unit
Wittmeier, Co-I	U of M	\$5,187	2015-2016	\$5,187	Endowment Fund
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		\$60,512,435		\$14,149,251	
TOTALS	Without DEVOTION funding	\$56,812,435		\$13,452,251	

APPENDIX B: List of Publications

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

55 total publications → 13 with > 1 DREAM member

1. **AZAD**, de Souza, Sharma AK. Artificially Sweetened Beverage Consumption During Pregnancy and Infant Body Mass Index-Reply. *JAMA Pediatrics* 2016 170(11):1117-1119.
2. Stiemsma LT, Arrieta MC, Dimitriu PA, Cheng J, Thorson L, Lefebvre DL, **AZAD MB**, Subbarao P, Mandhane P, Becker AB, Sears MR, Kollmann TR, the Canadian Healthy Infant Longitudinal Development (CHILD) Study Investigators, Mohn WM, Finlay BB, Turvey SE. Shifts in *Lachnospira* and *Clostridium* sp. in the 3-month stool microbiome are associated with preschool-age asthma. *Clinical Science (Accepted 09/12/2016)*
3. **AZAD MB**, Moyce BL, Guillemette L, Pascoe CD, **WICKLOW B**, **MCGAVOCK JM**, Halayko AJ, **DOLINSKY VW**. Diabetes in pregnancy and lung health in offspring: developmental origins of respiratory disease. *Paediatric Respiratory Reviews. (In Press)*
4. Bridgman SB, **AZAD MB**, Field CJ, Scott JA, Konya T, Guttman DS, Sears MR, Becker AB, Turvey SE, Mandhane PJ, Subbarao P, Kozyrskyj AL, and the CHILD Study Investigators. High fecal IgA is associated with reduced *C. difficile* colonization in infants. *Microbes and Infection*.
5. **AZAD MB**, Sharma AK, de Souza R, Dolinsky VW, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Lefebvre DL, Sears MR and the CHILD Study Investigators. Association of artificially-sweetened beverage consumption during pregnancy and infant body mass index. *JAMA Pediatrics* 2016 170(7):662-670.
 ► Published with a commissioned commentary; reported by international media (TIME Magazine, New York Times, Reuters, CTV, Global, Toronto Star, CBS, NBC, Vogue)
6. Bridgman SB, **AZAD MB**, Field CJ, Scott JA, Konya T, Guttman DS, Sears MR, Becker AB, Turvey SE, Mandhane PJ, Subbarao P, Kozyrskyj AL, and the CHILD Study Investigators. Infant gut immunity: a preliminary study of IgA associations with breastfeeding. *Journal of Developmental Origins of Health and Disease* 2016 7(1):68-72.
7. Reid AE, Chauhan BF, Rabbani R, Lys J, Copstein L, Mann A, Abou-Setta AM, Fiander M, MacKay DS, **MCGAVOCK J**, **WICKLOW B**, Zarychanski R, **AZAD MB**. Early exposure to non-nutritive sweeteners and long-term metabolic health: a systematic review. *Pediatrics* 2016 137(3):1-10
8. **AZAD MB**, Chan-Yeung M, Chan ES, Dytneriski AM, Kozyrskyj AL, Ramsey C, Becker AB. Wheezing patterns in early childhood and the risk of respiratory and allergic disease in adolescence. *JAMA Pediatrics* 2016 170(4):393-5.
9. Saban J, Zappitelli M, Samue S, Sood M, Todd A, Arora S, Erickson R, Kroeker, Manns B, **DART A**. (2016). Perceptions of pediatric nephrologists regarding timing of dialysis initiation in children in Canada. *Canadian Journal of Kidney Health and Disease* 3: 31.
<http://dx.doi.org/10.1186/s40697-016-0123-8>.

10. Komenda P, Lavallee B, Ferguson TW, Tangri N, Chartrand C, McLeod L, Gordon A, **DART A**, Rigatto C. (2016). The Prevalence of CKD in Rural Canadian Indigenous Peoples: Results From the First Nations Community Based Screening to Improve Kidney Health and Prevent Dialysis (FINISHED) Screen, Triage, and Treat Program. *American Journal of Kidney Disease* 16(30): 1-9.
11. Tong A, Samuel S, Zappitelli M, **DART A**, Furth S, Eddy A7, Groothoff J, Webb NJ, Yap HK, Bockenhauer D, Sinha A, Alexander SI, Goldstein SL, Gipson DS, Hanson CS, Evangelidis N, Crowe S, Harris T, Hemmelgarn BR, Manns B, Gill J, Tugwell P, Van Biesen W, Wheeler DC, Winkelmayer WC, Craig JC; SONG-Kids Investigators.(2016). Standardised Outcomes in Nephrology-Children and Adolescents (SONG-Kids): a protocol for establishing a core outcome set for children with chronic kidney disease. *Trials* 17(401). <http://dx.doi.org/10.1186/s13063-016-1528-5>.
12. **DART AB**, Zappitelli M, Sood MM, Alexander TR, Arora S, Erickson RL, Kroeker K, Soo A, Manns BJ, and Samuel SM.(2016). Variation in estimated glomerular filtration rate at dialysis initiation in children. *IPNA* 2016. <http://dx.doi.org/10.1007/s00467-016-3483-5>.
13. Xu W, Jia G, **DAVIE JR**, Murphy L, Kratzke R, and Banerji S. (2016) A 10-Gene Yin Yang Expression Ratio Signature for Stage IA and IB Non-Small Cell Lung Cancer. *J Thorac Oncol.* 11:12, 2150-2160. Doi: 10.1016/j.jtho.2016.07.023
14. Jahan S, Xu W, He S, Gonzalez C, Delcuve GP, and **DAVIE JR**. (2016) The chicken erythrocyte epigenome. *Epigenetics Chromatin* 9:19. doi: 10.1186/s13072-016-0068-2.
15. Khan DH, Gonzalez C, Tailor N, Hamedani MK, Leygue E, and **DAVIE JR**. (2016) Dynamic histone acetylation of H3K4me3 nucleosome regulates MCL1 pre-mRNA splicing. *J. Cell Physiol.* 231, 2196-2204.
16. Natarajan S, Begum F, Gim J, Wark L, Henderson D, **DAVIE JR**, Hombach-Klonisch S, and Klonisch T. (2016) High mobility group A2 protects cancer cells against telomere dysfunction. *Oncotarget.* 7,12761-82.
17. Warns JA, **DAVIE JR**, and Dhasarathy A. (2016) Connecting the dots: chromatin and alternative splicing in EMT. *Biochem. Cell Biol.* 94, 12-25.
18. **DAVIE JR**, Xu W, and Delcuve GP. (2016) Histone H3K4 trimethylation: dynamic interplay with pre-mRNA splicing. *Biochem. Cell Biol.* 94, 1-11.
19. Li Q, Pereira TJ, Moyce BL, Mahood TH, **DOUCETTE CA**, Rempel J and **DOLINSKY VW**. In utero exposure to gestational diabetes conditions TLR4 and TLR2 activated IL-1beta responses in spleen cells from rat offspring. *Biochim. Biophys. Acta* 1862:2137-2146 (2016).
20. **DOLINSKY VW**, Cole LK, Sparagna GC and **HATCH GM**. Cardiac mitochondrial energy metabolism in heart failure: Role of cardiolipin and sirtuins. *Biochim. Biophys. Acta* 1860:1544-1554 (2016).

21. Aharoni-Simon M, Shumiatcher R, Yeung A, Shih AZL, **DOLINSKY VW**, **DOUCETTE CA** and Luciani DS. Bcl-2 regulates reactive oxygen species signaling and a redox-sensitive mitochondrial proton leak in mouse pancreatic beta cells. *Endocrinology*. 157:2270-2281 (2016).
22. Chowdhury B, Xiang B, Muggenthaler M, **DOLINSKY VW** and Triggs-Raine B. Hyaluronidase 2 deficiency is a molecular cause of cor triatrium sinister in mice. *Int. J. Cardiol*. 209: 281-283 (2016).
23. Mink S, Roy Chowdhury SK, Gotes J, Cheng Z-Q, Kasian K and **FERNYHOUGH P**. (2016). Gentisic acid sodium salt, a phenolic compound, is superior to norepinephrine in reversing cardiovascular collapse, hepatic mitochondrial dysfunction and lactic acidemia in *Pseudomonas aeruginosa* septic shock in dogs. *Intensive Care Medicine Experimental (In Press)*.
24. Calcutt NA, Smith DR, Frizzi K, Roy Chowdhury SK, Mixcoatl-Zecuatl T, Saleh A, Muttalib N, Van der Ploeg R, Ochoa J, Sabbir MG, Gopaul A, Tessler L, Wess J, Jolivald CG and **FERNYHOUGH P**. (2016). Selective antagonism of muscarinic receptors is neuroprotective in peripheral neuropathy. *Journal of Clinical Investigation (In Press Jan 2017)*.
25. Alizadeh J, Zeki AA, Mirzaei N, Tewary S, Rezaei Moghaddam A, Glogowska A, Pandian N, Eftekharpour E, Weichec E, **GORDON JW**, Yoneda KY, Kenyon NJ, Hashemi M, Hombach-Klonisch S, Klonisch T, & Ghavami S. (2016). Mevalonate Cascade Inhibition by Simvastatin Induces the Intrinsic Apoptosis Pathway via Depletion of Isoprenoids in Tumor Cells. *Scientific Reports (submitted)*.
26. Ehyai S, Dionyssiou MG, **GORDON JW**, Williams D, Siu KWM, & McDermott JC. (2016). A p38 MAPK regulated MEF2:β-catenin interaction enhances canonical Wnt signalling. *Molecular and Cellular Biology* 36, 330-46.
27. So V, Jalan D, Lemaire M, Topham MK, **HATCH GM** and Epand RM. (2016). Diacylglycerol kinase epsilon suppresses expression of p53 and glycerol kinase in mouse embryo fibroblasts. *Biochim Biophys Acta* 1861(12 PtA), 1993-1999.
28. Cole LK, Mejia EM, Vandel M, Sparagna GC, Claypool SM, Dyck-Chan L, Klein J and **HATCH GM**. (2016). Impaired Cardiolipin Biosynthesis Prevents Hepatic Steatosis and Diet-Induced Obesity. *Diabetes* 65, 3289-3300.
29. Chang W, Chen L, and **HATCH GM**. (2016). Berberine treatment attenuates palmitate-induced insulin resistance through increased 1,2,3-triacyl-*sn*-glycerol synthesis and accumulation in H9c2 cardiomyocytes. *Biochim. Biophys. Acta - Mol. Cell Biol. Lipids* 1861, 352-362.
30. Laure P, Jarnouen K, Pinault M, Guimaraes C, Pais-de-Barros J-P, Chevalier S, Dumas J-F, Maillot F, **HATCH GM**, Pascal L, and Servais S. (2016). Reduced cardiolipin content decreases respiratory chain capacities and increase ATP synthesis yield in the human HepaRG cells. *Biochim. Biophys. Acta - Bioenergetics* 1857, 443-453.

31. Mejia E, Sipione S, Sparagna GC and **HATCH GM**. (2016). Reduced mitochondrial function in human Huntington Disease lymphoblasts is not due to alterations in cardiolipin metabolism or mitochondrial supercomplex assembly. *Lipids* 51, 561-569.
32. Aukema HM, Winter T, Ravandi A, Dalvi S, Miller DW and **HATCH GM**. (2016). Generation of bioactive oxylipins from exogenously added arachidonic, eicosapentaenoic and docosahexaenoic acid in primary human brain microvessel endothelial cells. *Lipids* 51, 591-599.
33. Chen W, Wei S, Xue H, Yu Y, Yao F, Zhang M, Xiao J, **HATCH GM** and Chen L. (2016). Pretreatment of rats with increased bioavailable berberine attenuates cerebral ischemia-reperfusion injury via down regulation of adenosine-5'-monophosphate kinase activity. *Eur. J. Pharmacol.* 779, 80-90.
34. Chang W, Li K, Guan F, Yao F, Yu Y, Zhang M, **HATCH GM** and Chen L. (2016). Berberine pretreatment confers cardioprotection against ischemia-reperfusion injury in a rat model of Type 2 diabetes. *J. Cardiovasc. Pharmacol. Ther.* 21, 486-494.
35. Wei S, Zhang M, Yu Y, Lan X, Yao F, Yan X, Chen L and **HATCH GM**. (2016). Berberine attenuates development of the hepatic gluconeogenesis and lipid metabolism disorder in type 2 diabetic mice and in palmitate-incubated HepG2 cells through suppression of the HNF-4 α miR122 pathway. *PloS One* 11, e0152097.
36. Parkinson FE and **HATCH GM**. (2016). Is there enhanced risk of cerebral ischemic stroke by sulphonylureas in type 2 diabetes? *Diabetes* 65, 2479-2481.
37. Nguyen HM, Mejia EM, Chang W, Wang Y, Watson E, On N, Miller DW and **HATCH GM**. (2016). Reduction in cardiolipin decreases mitochondrial spare respiratory capacity and increases glucose transport into and across human brain cerebral microvascular endothelial cells. *J. Neurochem.* 139, 68-80.
38. Wei S, Zhang M, Yu Y, Xue H, Lan X, Liu S, **HATCH GM**, and Chen L. (2016). HNF-4 α regulated miR-122 contributes to development of gluconeogenesis and lipid metabolism disorders in Type 2 diabetic mice and in palmitate-treated HepG2 cells. *Eur. J. Pharmacol.* 791:254-263.
39. Mejia EM and **HATCH GM**. (2016). Mitochondrial phospholipids: Role in mitochondrial function. *J. Bioenerg. Biomembr.* 48, 99-112.
40. Zuo F, Comte M, So J, Rosella L, **MCGAVOCK J**, Hobin E.(2016). Trajectories of objectively measured sedentary time among secondary students in Manitoba, Canada in the context of a province-wide physical education policy: A longitudinal analysis. *Can J Public Health* 107: 23-29.
41. Martens P, Shafer LA, DEAN HJ, **SELLERS EA**, Yamamoto J, Ludwig S, Heaman M, Philips-Beck W, Prior HJ, Morris M, **MCGAVOCK J**, **DART A**, Shen GX.(2016). Breastfeeding Initiation Associated With Reduced Incidence of Diabetes in Mothers and Offspring. *Obstetrics & Gynecology* 128: 1095-1104.

42. Hay J, **WITTMEIER K**, MacIntosh A, WICKLOW B, Duhamel T, **SELLERS E**, DEAN H, Ready E, Berard L, Kriellaars D, Shen GX, Gardiner P, **MCGAVOCK J**. (2016). Physical activity intensity and type 2 diabetes risk in overweight youth: a randomized trial. *Int J Obest (Lond)*. 40(4):607-14.
43. Hansen G, Beer DL, Vallance JK, Clark I, **SELLERS EAC**. Optic nerve sheath diameter ultrasonography in pediatric patients with diabetic ketoacidosis. *Can J Diabetes* 2016;40:126-30 (PMID 26704639).
44. **SELLERS EAC**, Hadjiyannakis S, Amed S, **DART AB**, Dyck RF, Hamilton J, Langlois V, Panagiotopoulos C, DEAN HJ. Persistent Albuminuria in Children with Type 2 Diabetes: A Canadian Paediatric Surveillance Program Study. *J Pediatr* 2016; 168:112-7. (PMID 26470688).
45. Manyanga T, **SELLERS EAC**, **WICKLOW BA**, Doupe M, Fransoo R. Is the change in body mass index among children newly diagnosed with type 1 diabetes mellitus associated with obesity at transition from pediatric to adult care? *Pediatric Diabetes* 2016 Jan8.doi: 10.1111/pedi.12344. [epub ahead of print] (PMID 26748829).
46. Manyanga T, **SELLERS EAC**, **WICKLOW BA**, Doupe M, Fransoo R. Not as skinny as we used to think: body mass index in children and adolescents at diagnosis of type 1 diabetes mellitus. *J Diabetes Complications* 2016; 30: 292-4. (PMID26718935).
47. Charison J, **WICKLOW BA**, DEAN HJ, **SELLERS EAC**. The Metabolic Phenotype of Youth Onset Type 2 Diabetes: the role of pregestational diabetes exposure and the hepatic nuclear factor 1 α G319S polymorphism. *Can J Diabetes* 2016; 40: 210-5. (PMID 27067001).
48. McMillan T, Girgis R, **SELLERS EAC**. Neonatal diabetes and protein losing enteropathy: a case report. *BMC Med Genet*. 2016; 17:32. (PMID 27098067).
49. Nadeau KJ, Anderson BJ, Chou H, Copeland KC, Hannon TS, Huang T TK, Lynch JL, Powell J, **SELLERS EAC**, Tamborlane WV, Zeitler P. Youth-onset Type 2 Diabetes Consensus Report: Current Status, Challenges, and Priorities. *Diabetes Care* 2016; 39: 1635-42.
50. Hansen G, Vallance JK, Beer DL, Clark I, **SELLERS EAC**. Serial optic nerve sheath diameter ultrasonography during pediatric diabetic ketoacidosis management: a pilot study. *J Diabetes and its Complications* 2016 Jul 21. pii: S1056-8727(16)30289-6. doi: 10.1016/j.jdiacomp.2016.07.010. [Epub ahead of print]
51. Davidson K, Schroth RJ, Levi JA, Yaffe AB, Mittermuller BA, **SELLERS EAC**. Higher body mass index associated with severe early childhood caries. *BMC Pediatr*. 2016; 16:137.
52. **SELLERS EAC**, DEAN HJ, Shafer LA, Martens PJ, Phillips-Beck W, Heaman M, **DART AB**, **MCGAVOCK J**, Morris M, Torshizi AA, Ludwig S, Shen GX. Exposure to gestational diabetes: impact on the development of early onset type 2 diabetes in Canadian First Nation and non-First Nation offspring. *Diabetes Care*; 2016;39: 2240-2246.

53. Osokogu OU1, Dukanovic J, Ferrajolo C, Dodd C, Pacurariu AC, Bramer WM, **'t JONG G**, Weibel D, Sturkenboom MC, Kaguelidou F. Pharmacoepidemiological safety studies in children: a systematic review. *Pharmacoepidemiol Drug Saf.* 2016 Jun 3.
54. **WITTMEIER K**, Mulder K. Time to Revisit Tummy Time: A commentary on plagiocephaly and development. *Accepted by Pediatrics and Child Health July 2016.*
55. **WITTMEIER K**, Restall G, Mulder K, Dufault B, Paterson M, Thiessen M, Lix L. Central intake to improve access to physiotherapy for children with complex needs: a mixed methods case report. *BMC Health Services Research* 16(1): 455 (2016).

2. Presentations

AZAD

Invited presentations

- 09/2016 Antibiotics in Early Life Alter Colonization and Predispose to Obesity *Nestle Nutrition Institute Workshop: Microbiota.* Playa del Carmen, Mexico.
- 06/2016 Breastfeeding, Human Milk Composition and the Developmental Origins of Asthma: New Evidence and Ongoing Research in the CHILD Study. *Research Rounds, Firestone Institute of Respiratory Health, McMaster University.* Hamilton, ON.
- 05/2016 Breastfeeding, human milk composition and the developmental origins of allergic disease. *Globalizing Advances in Allergic Disease Research: AllerGen's 8th Research Conference.* Vancouver, BC.
- 03/2016 Wheezing in early life and lung health in adolescence: 15-year follow up of the Canadian Asthma Primary Prevention Study. *Children's Hospital Research Institute of Manitoba Biology of Breathing Symposium.* Winnipeg, MB.
- 01/2016 Developmental origins of asthma: role of breastfeeding, milk composition and maternal factors. *Canadian Respiratory Research Network Annual General Meeting.* Ottawa, ON.

Abstracts

Loewen K, Monchka B, Mahmud SM, 't Jong G, AZAD MB. Prenatal antibiotic exposure and childhood asthma: a population-based study. (10/2016) *Canadian Society for Asthma and Clinical Immunology Annual Meeting.* Montreal, QC.

Bridgman SL, Mandal R, AZAD MB, Field CJ, Haqq AM, Becker AB, Turvey SE, Mandhane PJ, Subbarao P, Sears MR, Scott JA, Wishart DS, Kozyrskyj AL, and the CHILD Study Investigators. Gut microbiota metabolites: biomarkers for early childhood overweight? (11/2016) *International Human Microbiome Congress.* Houston, Texas, USA.

Klopp A, Vehling L, Becker AB, Mandhane P, Turvey SE, Sears MR, AZAD MB and the CHILD Study Investigators. Modes of infant feeding and childhood asthma development: is there a difference between direct breastfeeding and expressed breast milk? *American Academy of Pediatrics National Conference & Exhibition.* (10/2016) San Francisco, CA.

► *Selected for oral presentation; Best Abstract Award in Research*

Klopp A, Vehling L, Becker AB, Mandhane P, Turvey SE, Sears MR, AZAD MB and the CHILD Study Investigators. Do infants fed expressed breast milk have an increased risk of developing childhood

asthma compared to directly breastfed infants? *Canadian Society for Asthma and Clinical Immunology Annual Meeting*. (10/2016) Montreal, QC.

Sinnock H, Goruk S, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Lefebvre DL, Sears MR, Field CJ, AZAD MB and the CHILD Study Investigators. Determinants and Variability of Docosahexaenoic Acid (DHA) Content in Human Milk in the CHILD Study: Implications for Allergic Disease. (05/2016) *Globalizing Advances in Allergic Disease Research: 8th AllerGen Research Conference*. Vancouver, BC.

Sears MR, Tran MM, Lefebvre DL, Dai DWH, AZAD MB, Subbarao P, Lou W, Becker AB, Mandhane PJ, Turvey SE, and the CHILD Study Investigators. Specific parental atopy, sex of child and timing of introduction of 'allergenic' foods. (09/2016) *European Respiratory Society Annual Meeting*. London, UK.

Vehling L, Chan D, Becker AB, Subbarao P, Mandhane PJ, Turvey SE, Sears MR, AZAD MB, and the CHILD Study Investigators. Exclusive breastfeeding in hospital increases total breastfeeding duration, particularly among mothers at risk for early cessation: implications for health equity promotion beginning at birth. (05/2016) *Pathways to Equity: Levelling the Playing Field*. Winnipeg, MB; and (10/2016) *American Public Health Association Annual Meeting*. Denver, CO.

► Selected for oral presentation at both meetings

Doupe M, Nickel N, Brownell M, Chateau D, McGavock J, Santos R, Sarkar J, Enns J, Chartier M, AZAD MB. (05/2016) Effectiveness Re-Examined: Comparing the Impact of a Peer-led Healthy Living Intervention using an Equity Lens. *Canadian Association for Health Services and Policy Research 2016 Annual Meeting*. Toronto, ON.

Bridgman SL, Koleva PT, Mandal R, AZAD MB, Field CJ, Haqq AM, Becker AB, Turvey SE, Mandhane PJ, Subbarao P, Sears MR, Wishart DS, Kozyskyj AL and the CHILD Study Investigators. (05/2016) Gut microbiota metabolites in infancy: associations with breastfeeding and childhood overweight. *Experimental Biology 2016 Annual Meeting*. San Diego, CA.

Vehling L, Becker AB, Subbarao P, Mandhane PJ, Turvey SE, Sears MR, AZAD MB, and the CHILD Study Investigators. Breastfeeding in the CHILD Study: early intensity predicts long-term duration. (03/2016) *International Society for Research in Human Milk and Lactation (ISRHML) 2016 Conference*. Stellenbosch, South Africa.

DART

Invited presentations:

- 2016 Taking it with a pinch of SALT. *CCARM Meeting on Therapeutic Applications of Functional Foods and Bioactives*, Winnipeg, Canada.
- 10/2016 Patient reported satisfaction with a novel combined care clinic for children with type 2 diabetes and renal complications. *19th Annual CDA/CSEM Professional Conference and Annual Meetings*, Ottawa, Canada.

Abstracts

Aydede S, Kennedy F, Zhang Y, Dionne J, Levin P, Komenda P. Chronic Kidney Disease and Home Care: A Systematic Review. (8/2016). 28th International Congress of Pediatrics, Vancouver, Canada.

DART A, Tangri N, Komenda P, Walld R, Koseva I, Rajotte L, Burchill C, Chartier M. Prevalence of CKD in a Children: A Population Based Study in Manitoba. (5/2016). *CSN Annual General*

Meeting Halifax, Halifax, Canada.

DART A, Wicklow B, Blydt-Hansen T, Sellers E, Chateau D, Malik S, Dean H, Sharma A, McGavock J. Determinants of Albuminuria in Youth with Type 2 Diabetes. (5/2016). *CSN Annual General Meeting Halifax, Halifax, Canada.*

DART A, Lavallee B, Chartrand C, McLeod L, Ferguson T, Gordon A, Blydt-Hansen T, Rigatto C, Komenda P. CHRONIC KIDNEY DISEASE IN RURAL AND REMOTE INDIGENOUS CHILDREN: RESULTS FROM MANITOBA'S FINISHED SCREEN/TRIAGE/TREAT PROGRAM. (5/2016). *CSN Annual General Meeting Halifax, Halifax, Canada.*

DAVIE

Invited presentations:

- 3/2016 CLEPSO, 6th *Clinical Epigenetics International Meeting*, Dusseldorf, Germany.
- 3/2016 *Alberta Epigenetics Network*, Banff, Alberta.
- 6/2016 *Department of Cell and Developmental Biology*, University of Massachusetts Medical School.
- 7/2016 *International Union Biochemistry and Molecular Biology*, Vancouver, British Columbia.
- 9/2016 Keynote Speaker, *Graduate Student Retreat, Department of Biomedical Sciences*, University of North Dakota School of Medicine, Turtle River Park, North Dakota.
- 10/2016 *Department of Physiology and Pathophysiology*, University of Manitoba.
- 12/2016 *Asilomar Chromatin, Chromosomes & Epigenetics Conference*, Pacific Grove, California.

Abstracts

Does not keep record of abstract presentations.

DOLINSKY

Invited presentations:

- 5/2016 Gestational diabetes and the fetal programming of metabolic function: mechanisms and interventions. *Molecular and Cell Biology of Lipids Research Group Annual Symposium, University of Alberta*, Edmonton, AB.

Abstracts

Kereliuk SM, Cheung KG, Xiang B, Cole LK, Pereira TJ, Fonseca MA, Hatch GM, McGavock J, and DOLINSKY VW. Gestational diabetes mellitus adversely programs mitochondrial dysfunction and impaired cardiac function in the offspring. *Presented at the Canadian Cardiovascular Congress*, Oct 15-18, 2016. Montreal, QC.

Guillemette L, Dart A, DOLINSKY VW, Jassal DS, Duhamel T, and McGavock J. Exposure to gestational and pre-gestational diabetes impairs cardiac relaxation in adolescents with type 2 diabetes. *Presented at the Canadian Diabetes Association Meeting*, October, 2016, Ottawa, ON.

Guillemette L, Dart A, DOLINSKY VW, Jassal DS, Duhamel T, and McGavock J. Exposure to diabetes in utero impairs cardiac relaxation in youth with type 2 diabetes. *Presented at the Canadian Student Health Research Forum*, June 2016, Winnipeg, MB.

Moyce BL, Cole LK, Xiang B, Fonseca MA, Kotova O, 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. *Presented at the Canadian Student Health Research Forum*, June 2016, Winnipeg, MB.

Kereliuk SM, Cheung KG, Xiang B, Pereira TJ, Fonseca MA, Cole LK, Hatch GM, McGavock J, and DOLINSKY VW. Gestational diabetes mellitus adversely programs mitochondrial respiration which progresses to diastolic cardiac dysfunction in old age. *Presented at the Canadian Student Health Research Forum*, June 2016, Winnipeg, MB.

Kereliuk SM, Cheung KG, Xiang B, Cole LK, Pereira TJ, Fonseca MA, Hatch GM, McGavock J, and DOLINSKY VW. Gestational diabetes mellitus adversely programs mitochondrial dysfunction and impaired cardiac function in the offspring. *Presented at the Great Plains Lipid Conference*, May 15-18, 2016. Grand Forks, ND.

Moyce BL, Cole LK, Xiang B, Fonseca MA, Doucette CA, Hatch GM and DOLINSKY VW. Adiponectin deficiency during pregnancy alters fatty acid metabolism in the liver of pregnant mice. *Presented at the Great Plains Lipid Conference*, May 15-18, 2016. Grand Forks, ND.

Guillemette L, Dart A, DOLINSKY VW, Jassal DS, Duhamel T, and McGavock J. Exposure to diabetes in utero impairs cardiac relaxation in youth with type 2 diabetes. *Presented at the Canadian Society for Epidemiology and Biostatistics*, Winnipeg, MB June 10, 2016.

DOUCETTE

Invited presentations:

- 2016 Uncoupling protein 2 regulates daily cycles of insulin secretion capacity and glucose tolerance in mice. *Mid-West Islet Club Annual Meeting*, Indianapolis, United States.
- 2016 Investigating the impact of the HNF1aG319S variant on pancreatic beta cell function in youth-onset type 2 diabetes. *University of Manitoba Department of Physiology and Pathophysiology E&MD (Endocrinology and Metabolic Disease) Seminar Series*, Winnipeg, Canada.
- 2016 Unravelling the mechanisms of pancreatic beta cell failure in type 2 diabetes. *University of Manitoba Department of Immunology Seminar Series*, Winnipeg, Canada.

Abstracts

Moyce BL, Cole LK, Xiang B, Fonseca MA, DOUCETTE CA, Hatch GM and Dolinsky VW. (2016). Altered fatty acid and mitochondrial metabolism in the liver of pregnant adiponectin-deficient mice contributes to insulin resistance and gestational diabetes mellitus. *5th Annual DREAM Diabetes Research Symposium*, Winnipeg, Canada.

Seshadri N, Jonasson ME, Hunt K, Xiang B, Dolinsky VW, DOUCETTE CA. (2016). UCP2 Expression is rhythmic in pancreatic beta cells and contributes to the control of daily cycles of insulin secretion and glucose tolerance. *5th Annual DREAM Diabetes Research Symposium*, Winnipeg, Canada.

Brar N, Fonseca M, Kereliuk S, Pereira T, Xiang B, DOUCETTE CA and Dolinsky VW. (2016). Does Gestational Diabetes Mellitus Program Pancreatic Islet Development and Function in the Offspring? *5th Annual DREAM Diabetes Research Symposium*, Winnipeg, Canada.

Seshadri N, Jonasson ME, Hunt K, Xiang B, Dolinsky VW, DOUCETTE CA. (2016). UCP2 expression is rhythmic in pancreatic beta cells and contributes to the control of daily cycles of insulin secretion and glucose tolerance. *Child Health Research Day*, Winnipeg, Canada.

Seshadri N, Jonasson ME, Hunt K, Xiang B, Dolinsky VW, DOUCETTE CA. (2016). UCP2 Expression is rhythmic in pancreatic beta cells and contributes to the control of daily cycles of insulin secretion and glucose tolerance. *Canadian Student Health Research Forum*, Winnipeg, Canada.

Seshadri N, Jonasson ME, Cooper S, Vernon W. Dolinsky VW, DOUCETTE CA. (2016). UCP2 expression is rhythmic in pancreatic beta cells and contributes to the control of daily cycles of insulin secretion and glucose tolerance. *A-BC Islet Workshop*, SilverStar Resort, British Columbia.

FERNYHOUGH

Invited presentations:

- 6/2016 Therapy for peripheral nerve disease – leaving the bench and approaching the bedside. *International Diabetic Neuropathy Consortium (IDNC) annual meeting at Aarhus University*, Aarhus, Denmark.
- 9/2016 Muscarinic receptor antagonism to treat peripheral neuropathy. *The Foundation for Peripheral Neuropathy 2016 International Research Symposium*, Palmer house, Chicago, USA.
- 9/2016 Overcoming bioenergetics maladaptions to hyperglycaemia. *ISDN/NeuroDiab XXVI*, Bucharest, Romania.
- 10/2016 The SPOR (Strategy for Patient-Oriented Research) in Diabetes and its Related Complications Initiative-Leveraging Technology and Networking for Diabetes in Research in Canada. Muscarinic receptor antagonism to treat peripheral neuropathy. *Canadian Diabetes Association Professional Conference Annual Meeting*, Ottawa, Canada.

Abstracts

Sabbir MG and FERNYHOUGH P. (2016). Muscarinic acetylcholine type 1 receptor regulates mitochondrial trafficking through altered cytoskeleton in adult sensory neurons. *Keystone Symposia – G protein-coupled receptors: structure, signaling and drug discovery*. Keystone, CO, USA.

Aghanoori M-R and FERNYHOUGH P. (2016). Insulin enhances AMPK activity and mitochondrial function in DRG neurons. *NeuroDiab XXVI*. Bucharest, Romania.

Sabbir MG and FERNYHOUGH P. (2016). Over-expression of muscarinic acetylcholine type 1 receptor causes cytoskeletal abnormalities and defects in mitochondrial trafficking in adult sensory neurons. *NeuroDiab XXVI*. Bucharest, Romania.

Sabbir MG and FERNYHOUGH P. (2016). Effect of pirenzepine and muscarinic toxin-7 on muscarinic acetylcholine type-1 receptor internalization and downstream signaling cascades. *Canadian Association for Neuroscience*. Toronto, ON, Canada.

FERNYHOUGH P and Sabbir MG. (2016). Muscarinic acetylcholine receptor type-1 antagonists modulate post-translational modifications of Ca²⁺/calmodulin-dependent protein kinase

kinase β in adult dorsal root ganglion neurons. *46th Annual Meeting. Society for Neuroscience*. San Diego, CA, USA.

Sabbir MG and FERNYHOUGH P. (2016). Over-expression of muscarinic acetylcholine type 1 receptor causes cytoskeletal abnormalities and defects in mitochondrial trafficking in adult sensory neurons. *46th Annual Meeting. Society for Neuroscience*. San Diego, CA, USA.

Roy Chowdhury SK, Djordjevic J, Thomson E, Smith DR, Albensi BC and FERNYHOUGH P. (2016). Altered mitochondrial function and succinate-dependent H₂O₂ production in the cortex of type 1 diabetic rodents. *46th Annual Meeting. Society for Neuroscience*. San Diego, CA, USA.

Snow WM, McAllister D, Champagne-Jorgensen K, Djordjevic J, Roy Chowdhury SK, FERNYHOUGH P and Albensi BC. (2016). Investigating a role for NF κ B in cellular bioenergetics in normal and amyloid-exposed neurons *in vivo*. *AAIC*. Toronto, ON, Canada.

GORDON

Invited presentations:

- 4/2016 The role of mitochondrial dysfunction and microRNA-133 in the development of muscle insulin resistance in offspring exposed to type 2 diabetes. *Therapeutic Applications of Functional Foods and Bioactives Conference, St. Boniface Research Centre, Winnipeg, MB.*
- 3/2016 Regulation of mitochondrial function and programmed cell death by microRNA-133a. *Department of Biology and Chemistry Seminar, University of Winnipeg, Winnipeg, MB.*

Abstracts

Rezaei Moghadam A, Ghavami S, GORDON JW. Temozolomide Induces Dose/Time Dependent Cell Death in Human Rhabdomyosarcoma and Mouse Myoblast Cells. *Canadian Student Health Research Forum, Winnipeg 2016*.

Mughal W, da Silva Rosa S, Chapman D, Hai Y, Diehl-Jones W, & GORDON JW. Myocardin Regulated Genetic Pathway Modulates Mitochondrial Permeability Transition Pore Closure to Prevent Cell Death during Cardiac Differentiation. *Canadian Student Health Research Forum, Winnipeg 2016*.

Martens M, Hai Y, GORDON JW, Archibald A, Ivanco T, Blaney C, Rampitsch C, Nguyen L, Diehl-Jones W. Mitigation of Hypoxic-Ischemic Damage in Newborn Rats by Misoprostol, a Prostaglandin E₂ Receptor Agonist. *Canadian Student Health Research Forum, Winnipeg 2016*.

da Silva Rosa S, Mughal W, Nguyen L, Chapman D, Aliani M, Pereira TJ, Rampitsch C, Dolinsky VW, & GORDON JW. Determining the Role of Skeletal Muscle microRNA-133a in Early-Onset Insulin Resistance. *Canadian Student Health Research Forum, Winnipeg 2016*.

Field J, da Silva Rosa S, Archibald A, Mughal W, GORDON JW and Diehl-Jones W. BNIP3 Regulation of Intracellular Calcium. *Canadian Student Health Research Forum, Winnipeg 2016*.

Mughal W, da Silva Rosa S, Chapman D, Hai Y, Diehl-Jones W, & GORDON JW. Myocardin Regulated Genetic Pathway Modulates Mitochondrial Permeability Transition Pore Closure to Prevent Cell Death during Cardiac Differentiation. *Experimental Biology, San Diego, 2016*.

Martens M, Hai Y, GORDON JW, Archibald A, Ivanco T, Blaney C, Rampitsch C, Nguyen L, Diehl-Jones W. Mitigation of Hypoxic-Ischemic Damage in Newborn Rats by Misoprostol, a Prostaglandin E2 Receptor Agonist. *Experimental Biology*, San Diego, 2016.

da Silva Rosa S, Mughal W, Nguyen L, Chapman D, Aliani M, Pereira TJ, Rampitsch C, Dolinsky VW, & GORDON JW. Determining the Role of Skeletal Muscle microRNA-133a in Early-Onset Insulin Resistance. *Experimental Biology*, San Diego, 2016.

Field J, da Silva Rosa S, Archibald A, Mughal W, GORDON JW and Diehl-Jones W. BNIP3 Regulation of Intracellular Calcium. *Experimental Biology*, San Diego, 2016.

HATCH

Invited presentations:

- 4/2016 University of Pittsburgh, *Acute Lung Injury Center of Excellence*, Pittsburgh, USA.
- 6/2016 2nd Annual Meeting of the Biophysical Society of Canada, Winnipeg, MB.
- 6/2016 2nd Annual Northern Great Plains Lipid Conference, Grand Forks, USA.
- 7/2016 Canada-China Symposium on Atherosclerosis, Thrombosis, and Vascular Biology (CCS-ATVB), Calgary, AB.

Abstracts

HATCH GM, Nguyen HW, Mejia EM, Chang W, Wang Y, Watson E, On N, Miller DW (2016) Loss of Cardiolipin Stimulates Glucose Uptake Into and Across Human Blood Brain Barrier Endothelial Cells. *2cd Annual Can. Biophys. Soc. Mtg.*, Winnipeg, June 1, 2016.

HATCH GM, Nguyen HW, Mejia EM, Chang W, Wang Y, Watson E, On N, Miller DW (2016) Knockdown of cardiolipin synthase reduces mitochondrial spare respiratory capacity and increases glucose transport into and across human brain cerebral microvascular endothelial cells. *Northern Great Plains Lipids Conference*, Grand Forks, ND, USA, June 12, 2016.

Mejia, EM, Bouchard, EDJ, Banerji, V, and HATCH, G.M. (2016) The role of tafazzin and MLCL AT-1 in mitochondrial function. *Northern Great Plains Lipids Conference*, Grand Forks, ND, USA, June 11, 2016.

Cole LK, Mejia EM, Vandel M, Sparagna GC, Claypool SM, Dyck-Chan L, Klein J, and HATCH GM (2016) Elevated hepatic fatty acid oxidation contributes to low-body weight in tafazzin knock-down mice. *Barth Syndrome Fdn. Int'l Family and Scientific Conf.*, Clearwater Bay, Florida, July 22, 2016. (L. Cole. Awarded a BSF Travel Award)

Mejia, EM, Bouchard, ED, Banerji, V, and HATCH, G.M. (2016) The role of tafazzin and MLCL AT-1 in mitochondrial function. *Barth Syndrome Fdn. Int'l Family and Scientific Conf.*, Clearwater Bay, Florida, July 22, 2016. (E. Mejia, Awarded CHRIM Travel Award)

Kereliuk, S.M., Cheung, K.G., Xiang, B., Cole, L.K., Fonseca, M.A., HATCH, G.M., McGavock, J. and Dolinsky, V.W. (2016) Gestational diabetes mellitus impairs mitochondrial and cardiac function in the offspring. *12th Annual Child Health Research Day*, Winnipeg, Oct. 5, 2016.

Kim J.H., Cole, L.K., Bayir, H., Kagan V.E., HATCH, G.M., and Kauppinen, T.M. (2016) Barth Syndrome mice model shows elevated neuroinflammation and detrimental hippocampal changes. *12th Annual Child Health Research Day*, Winnipeg, Oct. 5, 2016.

Cole, L.K., Meija, E.M., Vandel, M., Sparagna, G.C., Claypool, S.M., Dyck-Chan, L., Klein, J. and HATCH, G. M. (2016) Impaired Cardiolipin Biosynthesis Prevents Hepatic Steatosis and Diet-Induced Obesity. *12th Annual Child Health Research Day*, Winnipeg, Oct. 5, 2016.

Meija, E.M., Bouchard, E.D., Banerji, V., and HATCH, G.M. (2016) The role of tafazzin and MLCL AT-1 in mitochondrial function. *Canadian Lipoprotein Conference*, St. John's, Nfld, Sept 17, 2016, PO-30.

MCGAVOCK

Invited presentations:

- 1/2016 Resilience as a path to wellness in youth – Keynote. *Shaping the Future Conference*, Kananaskis, AB.
- 2/2016 Resilience as a path to wellness in youth . *Alberta Health Services Webinar*, Edmonton, AB.
- 9/2016 Resilience as a path to wellness in youth – Keynote . *National Aboriginal Diabetes Association*, Thunderbay, ON.
- 9/2016 Resilience as a path to wellness in youth. *Alberta Public Health Webinar*, Edmonton, AB.
- 10/2016 Exercise and Diabetes: Sometimes it works - Invited Plenary Talk. *Canadian Diabetes Association*, Ottawa, ON.
- 2016 Resilience as a path to wellness in youth – Keynote. *Jennifer Wall Lecture*, McGill University, Montreal, QC.

Abstracts

Does not keep record of abstract presentations.

SELLERS

Invited presentations:

- 4/2016 Type 2 diabetes in Children: what are the risks? Indigenous Wellness: Reclaiming Our Knowledge. *Manitoba First Nation Diabetes Committee Workshop*, Winnipeg, MB.
- 8/2016 Type 2 Diabetes in Indigenous Children. *International Pediatric Association Congress*, Vancouver, BC.

T'JONG

Invited presentations:

- 2016 Antidepressants and Depression in Pregnancy. *2016 Medical Genetics Academic Session*, Winnipeg, Manitoba.
- 2016 Canadian Pharmacogenomic Network for Drug Safety (CPNDS) *CancerCare*; Winnipeg, Manitoba.
- 2016 The Learning Health Care System. *2016 Pediatrics Departmental Retreat*, Winnipeg, Manitoba.

WICKLOW

Invited presentations:

- 10/2016 The Seven Generations: Childhood Type 2 Diabetes Risk, Beyond Gestational Weight Gain and Glycemic Control. *19th Annual CDA/CSEM Professional Conference and Annual Meetings, Ottawa, Canada.*

WITTMEIER

Invited presentations:

- 4/2016 Tummy Time: Physiotherapists Perspectives on Deformational Plagiocephaly . University of Manitoba, *Department of Pediatrics Grand Rounds, Winnipeg, MB.*
- 6/2016 Knowledge Translation: Pairing the practice and science. *Canadian Child Health Clinician Scientist Program, Niagara Falls, ON.*

APPENDIX C: Proposed Budget 2017

Expenditure	Unit Cost	#/year	Total
STAFF			
Coordinator (Jana)	\$60,000.00	0.1666667	\$10,000.00
KT staff	\$60,000.00	0.3333333	\$20,000.00
Research Nurse (Taralyn)	\$70,000.00	0.3	\$21,000.00
Joe's Lab	\$20,000.00	1	\$20,000.00
NextGen (Jen)	\$55,000.00	0.4	\$22,000.00
Analyst (Atul)	\$10,000.00	1	\$10,000.00
<i>Sub-Total</i>			<i>\$103,000.00</i>
MEETINGS			
Pathing Exercise	\$2,000.00	1	\$2,000.00
Advisory Group & Patient Advisory Group	\$1,000.00	4	\$4,000.00
Priority setting (James Lind)	\$5,000.00	1	\$5,000.00
Annual Symposium	\$10,000.00	1	\$10,000.00
<i>Sub-Total</i>			<i>\$21,000.00</i>
CLINICAL			
Obesity Sub-Theme	\$10,000.00	1	\$10,000.00
CON-SNP/Dream Catchers	\$4,000.00	1	\$4,000.00
Professional Development	\$5,000.00	1	\$5,000.00
<i>Sub-Total</i>			<i>\$19,000.00</i>
BASIC			
Seahorse Support	\$65,000.00	0.4615385	\$30,000.00
Catalyst Grants	\$20,000.00	3	\$60,000.00
<i>Sub-Total</i>			<i>\$90,000.00</i>
OTHER			
Grant Reviews	\$250.00	8	\$2,000.00
Guest Speakers	\$1,500.00	2	\$3,000.00
Website	\$2,000.00	1	\$2,000.00
Group Leader Stipends	\$5,000.00	2	\$10,000.00
<i>Sub-Total</i>			<i>\$17,000.00</i>
TOTAL ANNUAL REQUEST			\$250,000.00

APPENDIX D: Network Map

