



Diabetes Research Envisioned and Accomplished in Manitoba (DREAM) Theme

Manitoba Institute of Child Health

ANNUAL REPORT

November 23, 2012

Submitted by: Dr. Grant M. Hatch & Dr. Jon McGavock, Co-Directors of DREAM

Vision:

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.

History of the Establishment of DREAM

Application for formation of the DREAM Theme was submitted by Drs. Jon McGavock and Grant Hatch to Dr. Terry Klassen in December 2011 for approval by the Board of Directors of MICH. After initial approval by the Board in December of 2011 the DREAM Theme became a fully established Theme within MICH and with formal operations commencing on April 1, 2012. Within the DREAM framework there are three research subthemes; 1. Developmental Origins of Disease, 2. Cardio-Renal Complications and 3. Treatment Approaches.

Location of DREAM

DREAM is located on the fifth and six floors of the JBRC with the MICH. Major research equipment was provided by members of DREAM and studies on research related to type 2 diabetes in children is ongoing. DREAM is in the process of developing a website.

Current Membership and DREAM Personnel.

Faculty Members

The Directors of DREAM are Dr. Grant M. Hatch, Professor Pharmacology and Therapeutics, Biochemistry and Medical Genetics and Dr. Jon McGavock, Assistant Professor, Department of Pediatrics and Child Health.

Other members include Heather Dean MD, Elizabeth Sellers MD, Brandy Wicklow MD, Allison Dart MD, Vern Dolinsky PhD, Tom Blydt Hansen MD, Kristy Wittmeier MD, Jim Davie PhD, Geert 't Jong MD, PhD, Joe Gordon PhD, Christine Robson-Doucette PhD.

Non- Faculty Members:

Research Coordinator, Erika Bloomfield, Director Clinical Research Unit, Susan Acland

Infrastructure

Each member of DREAM has his/her own research laboratory, research grants and other infrastructural support to conduct his/her research program. DREAM, in addition

to its research work in type 2 diabetes carried out by members, serves as a communal resource to support the research activities of its members, the University of Manitoba and other institutions. The various scientific programs of DREAM also serve as catalysts to facilitate research collaboration and exchange of expertise between members internal and external to the University. This year we hired the following new staff to help with the DREAM Theme management and research productivity:

1. Erika Bloomfield – Research Coordinator
2. TDB - Clinical Research Nurse
3. Mario Fonseca – Research Technician
4. TBD – Part-time sonographer

Management of DREAM and Business Meetings

The DREAM Theme conducts regular scientific and business meetings throughout the year. The Management Committee of the DREAM, consisting of Drs. Hatch and McGavock, are responsible for the general operation of DREAM. The day-to-day operation of DREAM is currently carried out by the researchers whom report directly to the Management Committee. Drs. Hatch and McGavock meet monthly (last Wednesday each month) with DREAM Theme subtheme leaders to discuss ongoing projects.

Research Support

Support for development of DREAM was based initially on a \$675,000 grant (2012-2014) provided by the Manitoba Institute of Child Health (MICH). \$175,000 in 2012, \$250,000 in 2013, \$250,000 in 2014.

Each member of DREAM has his/her own departmental affiliation, research laboratory, research grants and research personnel to support his/her research program. Research support currently held by members of DREAM include grants from the Canadian Institutes of Health Research (CIHR), Canadian Cancer Society, Heart and Stroke Foundation, Canadian Foundation for Innovation (CFI), Canadian Diabetes Association (CDA) and Lawson Foundation.

Collectively, theme members secured 17 operating, equipment and salary wards totalling over \$4 million in research funding (>\$1 million annually) in 2012 (see attached table below). Initial Sub-theme seed grant funding (~\$45,000) offered to theme members from the 2012 proposal were leveraged and led to 4 successful grant applications totally \$540,000. Dr. Jon McGavock (\$200,000 over two years) and Dr. Brandy Wicklow (\$100,000 over 2 years) secured 2 grants from the Lawson Foundation. Drs Vern Dolinsky (\$150,000/2yrs) and Allison Dart (\$90,000/2yrs) each secured operating grants from the MHRC. Support for DREAM Theme funding was integral in the successful renewal of Dr. Hatch's Tier I Canada Research Chair (\$1,400,000 over seven years, 2013-2020). In addition, a \$583,895 infrastructure grant for the DREAM Theme was recently secured through Dr. Vernon Dolinsky's

successful Canadian Foundation for Innovation-Leaders Opportunity Fund (CFI-LFF) application and was leveraged by the initial \$675,000 commitment from MICH. The infrastructure will be housed within the MICH laboratories on the 6th floor of the John Buhler Research Center.

Scientific Meetings

The DREAM Theme hosted its first annual Symposium on November 22, 2012 entitled “Mitochondria in Health and Disease”. Initial feedback indicated that the symposium was well attended and appreciated by the scientific community.

Seminars of Invitees to DREAM

Invited Speakers: This year through the first annual Symposium on November 22, 2012, DREAM hosted the visit of Dr. Yuguang (Roger) Shi, Pennsylvania State University, USA, and Dr. Marie-France Hivert, University of Sherbrooke, Quebec. Four theme members (McGavock, Dolinsky, Doucette, Hatch) and 3 scientists from outside MICH presented their work related to mitochondrial function as it relates to type 2 diabetes and health. We had 75 delegates attended MICH grand rounds and 38 delegates attend the entire symposium. Feedback is being compiled via Survey Monkey and will be submitted to the board before the end of the year.

Report of Expenditures

The DREAM Theme reports to the MICH with its yearly expenditure. An account at the MICH has been set up by through Nichola Wigle for this purpose. Drs. Hatch and McGavock have signing authority on this account. These funds have been used exclusively for the research activities of DREAM.

Collaborations and Networking

DREAM has begun to develop active collaborations with other research groups within the Faculty of Medicine and colleagues elsewhere. DREAM has established a strong network with diabetes researchers in Quebec through Dr. Andre Carpentier.

Other activities:

Dr. Heather Dean has established a Community Advisory Panel (CAP) under the DREAM subtheme of Developmental Origins of Disease. The CAP was established to provide community stakeholders with information on the activities of DREAM and to provide DREAM with a CAP as an essential component of CIHR's Strategy for Patient Oriented Research (SPOR) Network.

DREAM was the focus of an article entitled “Dealing with Diabetes” published in the Wave Magazine, a community based health and wellness bi-monthly collaborative

publication with the Winnipeg Free Press, Winnipeg Regional Health Authority and the University of Manitoba that highlights health research and researchers in Winnipeg.

Financial Progress Report:

The \$175,000 initial allocation for 2012 provided grant funding support for development of each of the three themes as well a support for the Research Coordinator, Erika Bloomfield. In addition, support of the November 22, 2012 Scientific Meeting was provided through the initial allocation.

Budget Proposal for DREAM for 2013

Expenditure	Unit Cost	#/year	Total
1. OPERATING			
Clinical Research Nurse Coordinator	\$60,000.00	0.5	\$30,000.00
Research Assistants	\$46,666.00	1.5	\$70,000.00
Equipment Maintenance	\$10,000.00	1	\$10,000.00
Sub-Total			\$110,000.00
*2. Developmental			
Operating Grants	\$40,000.00	3	\$120,000.00
3. MEETINGS			
Annual symposium	\$4,000.00	1	\$7,000.00
Monthly meetings	\$200.00	12	\$2,400.00
Sub-Total			\$9,400.00
4. ADMINISTRATION			
Group leader stipends	\$5,000.00	2	\$10,000.00
Sub-Total			\$10,000.00
CORE STAFF/MAINTENANCE			\$110,000.00
SMALL GRANTS			\$120,000.00
MEETINGS			\$9,400.00
ADMINISTRATION			\$10,000.00
TOTAL REQUEST			\$249,400.00

*The objective of the Developmental Operating Grant is to provide seed money for new projects within the DREAM sub-themes in order to develop major future sub-theme research and treatment initiatives which will be sustained through external research funding agencies (eg. CIHR, CDA, Lawson Foundation, etc.).

Operating Grants Secured in 2012

Theme Member	Agency	Amount	Duration	Funding/yr	Type
Hatch G	CRC Chair	\$1,400,000	2013-20	\$200,000	Salary/Operating
Hatch G	Heart and Stroke	\$100,000	2012-14	\$50,000	Operating
Hatch G	NSERC	\$25,000	2012-13	\$25,000	Operating
Hatch G	Barth Foundation	\$40,000	2012-13	\$40,000	Operating
Hatch G	NIH	\$20,000	2012-13	\$20,000	Operating
McGavock	Lawson	\$200,000	2013-15	\$100,000	Operating
McGavock	MHRC	\$100,000	2012-13	\$100,000	Operating
McGavock	MICH	\$40,000	2012-13	\$40,000	Operating
Dolinsky	Heart and Stroke	\$100,000	2012-14	\$50,000	Operating
Dolinsky	MHRC	\$150,000	2012-14	\$75,000	Operating
Dolinsky	CFI	\$550,000	2013		Equipment
Dart	MHRC	\$90,320	2012-14	\$45,000	Operating
Dart	MMSF	\$22,000	2012-13	\$22,000	Operating
Blydt-Hansen	CIHR	\$950,000	2012-15	\$190,000	Operating
Davie	Cancer Care MB	\$120,000	2012-14	\$60,000	Operating
Davie	CIHR	\$100,000	2012-13	\$100,000	Operating
	GRANTS	AMOUNT		AMOUNT/YR	
TOTALS	17	\$4,007,320		\$1,117,000	

Total Publications:

Jim Davie (7)

1. Healy, S., Khan, P., He S., and Davie, J.R. (2012) Histone H3 phosphorylation, immediate-early gene expression and the nucleosomal response: A historical perspective. *Biochem. Cell. Biol.* 90, 39-54.
2. Sundar, I.K., Chung, S., Hwang, J.W., Lapek, J.D., Bulger, M., Friedman, A.E., Yao, H., Davie, J.R., and Rahman, I. (2012) Mitogen- and stress-activated kinase 1 (MSK1) regulates cigarette smoke induced histone modifications on NF- κ B-dependent genes. *PLoS One* 7, e31378
3. Delcuve, G.P., Khan, D.H. and Davie, J.R. (2012) Roles of histone deacetylases (HDACs) in epigenetic regulation: emerging paradigms from studies with inhibitors. *Clinical Epigenetics* 4, 5, 1-13.
4. Khan, D.H., Jahan, S. and Davie, J.R. (2012) Pre-mRNA splicing: Role in epigenetics and implications in disease. *Advances in Biol. Regul.* 52, 377-388.
5. Healy, S, Khan, P. and Davie, J.R. (2012) Immediate early response genes and cell transformation. *Pharmacology and Therapeutics* in press.

Manuscripts Submitted or in Preparation

6. Khan, D.S., He, S., Yu, J., Winter, S., Seiser, C. and Davie, J.R. (2012) Phosphorylation-dependent localization and dissociation of the HDAC1 and HDAC2 during mitosis. *Mol. Biol. Cell.* submitted.
7. Khan, P., Drobic, B., Pérez-Cadahía, B., Healy, S. and Davie, J.R. (2012) Mitogen- and stress-activated protein kinases 1 and 2 are required for maximal trefoil factor 1 induction. *J. Biol. Chem.* submitted.

Vern Dolinsky (4)

1. DOLINSKY V.W., Jones, K.E., Sidhu, R.S. Haykowsky, M., Czubyrt, M.P., Gordon, T. and Dyck, J.R.B. Resveratrol enhances exercise performance by improving skeletal muscle strength and cardiac function in rats. *J. Physiol.* (2012) 590: 2783-2799.
2. Rueda-Clausen, C.F., Morton, J.S., DOLINSKY V.W., Dyck, J.R.B., and Davidge, S.T. Synergistic effects of prenatal hypoxia and postnatal high fat diet in the development of cardiovascular pathology in young rats. *Am. J. Physiol. Reg. Integr. Comp. Physiol.* 303:R418-R426 (2012).
3. Breen, D.M., DOLINSKY V.W., Zhang, H., Ghanim, H., Guo, J., Mroziejewicz, M., Tsiani, E.L., Bendeck, M.P., Dandona, P., Dyck, J.R., Heximer, S.P., Giacca, A. Resveratrol inhibits neointimal formation after arterial injury through an endothelial nitric oxide synthase-dependent mechanism. *Atherosclerosis* 222: 375-381 (2012).
4. Bourque, S.L., DOLINSKY V.W., Dyck, J.R.B., and Davidge, S.T. Maternal resveratrol treatment during pregnancy improves adverse fetal outcomes in a rat model of severe hypoxia. *Placenta*. 33: 449-452 (2012).

Christine Doucette (3)

1. Mailloux RJ, Fu A, **Robson-Doucette CA**, Allister E, Wheeler MB, Screatton R, Harper M-E (2012) Glutathionylation starts of uncoupling protein-2 and the control of glucose-stimulated insulin secretion. *Journal of Biological Chemistry*. Epub DOI:10.1074/jbc.M112.393538

2. Guo Q, **Robson-Doucette CA**, Allister EM, Wheeler MB (2012) Inducible deletion of UCP2 in pancreatic β cells enhances insulin secretion. *Canadian Journal of Diabetes*. 36 (5):237-243
3. Tang C, Koulajian K, Schuiki I, Zhang L, Desai T, Ivovic A, Wang P, **Robson-Doucette CA**, Wheeler MB, Minassian B, Volchuk A, Giacca A (2012) Glucose-induced beta cell dysfunction in vivo: link between oxidative stress and endoplasmic reticulum stress. *Diabetologia*. *Accepted for publication Dec 7, 2011*

Blydt-Hansen, Tom (5)

1. Siminoski K, Lee KC, Abish S, Alos N, Bell L, Blydt-Hansen T, Couch R, Cummings EA, Ellsworth J, Feber J, Fernandez CV, Halton J, Huber AM, Israels S, Jurencak R, Lang B, Laverdière C, Leblanc C, Lewis V, Midgley J, Miettunen PM, Oen K, Phan V, Pinsk M, Rauch F, Rodd C, Roth J, Saint-Cyr C, Scuccimarri R, Stephure D, Taback S, Wilson B, Ward LM. The development of bone mineral lateralization in the arms. the Canadian STOPP Consortium (National Pediatric Bone Health Working Group). The development of bone mineral lateralization in the arms. *Osteoporos Int*. 2012 Jun 29. PubMed PMID: 22744715. Co-Author, Published
2. Wiebe C, Gibson IW, Blydt-Hansen TD, Karpinski M, Ho J, Storsley LJ, Goldberg A, Birk PE, Rush DN, Nickerson PW. Evolution and clinical pathologic correlations of de novo donor-specific HLA antibody post kidney transplant. *Am J Transplant*. 2012 May;12(5):1157-67. doi: 10.1111/j.1600-6143.2012.04013.x. PubMed PMID: 22429309. Co-Author, Published
3. Mar Flynn JT, Pierce CB, Miller ER 3rd, Charleston J, Samuels JA, Kupferman J, Furth SL, Warady BA; Chronic Kidney Disease in Children Study Group. Reliability of resting blood pressure measurement and classification using an oscillometric device in c PubMed PMID: 22048052; PubMed Central PMCID: PMC3274610. Co-Author, Published
4. Feber J, Gaboury I, Ni A, Alos N, Arora S, Bell L, Blydt-Hansen T, Clarson C, Filler G, Hay J, Hebert D, Lentle B, Matzinger M, Midgley J, Moher D, Pinsk M, Rauch F, Rodd C, Shenouda N, Siminoski K, Ward LM; The Canadian STOPP Consortium. Skeletal findings in children recently initiating glucocorticoids for the treatment of nephrotic syndrome. *Osteoporos Int*. 2012 Feb;23. (2):751-760. PubMed PMID: 21494860. Co-Author, Published
5. Rodd C, Lang B, Ramsay T, Alos N, Huber AM, Cabral DA, Scuccimarri R, Miettunen PM, Roth J, Atkinson SA, Couch R, Cummings EA, Dent PB, Ellsworth J, Hay J, Houghton K, Jurencak R, Larché M, LeBlanc C, Oen K, Saint-Cyr C, Stein R, Stephure D, Taback S, Lentle B, Matzinger M, Shenouda N, Moher D, Rauch F, Siminoski K, Ward LM; Canadian Steroid-Associated Osteoporosis in the Pediatric Population (STOPP) Consortium. Incident vertebral fractures among children with rheumatic disorders 12 months after glucocorticoid initiation: a national observational study. *Arthritis Care Res (Hoboken)*. 2012 Jan;64(1):122-31. doi:10.1002/acr.20589. PubMed PMID: 22213727. Co-Author, Published children with chronic kidney disease. *J Pediatr*. 2012 Mar;160(3):434-440.e1. Epub 2011 Nov 1.

Dart, Alison (2)

1. Dart AB, Sellers EA, Dean HJ. Kidney disease and youth onset type 2 diabetes: considerations for the general practitioner. *International journal of pediatrics* 2012

2. Dart AB, Sellers EA, Martens PJ, Rigatto C, Brownell MD, Dean HJ. High Burden of Kidney Disease in Youth-Onset Type 2 Diabetes. 35(6):1265-71, 2012 (PMID: 22432116).

Dean, Heather (13)

1. Hui A, Back L, Ludwig S, Gardiner P, Sevenhuysen G, Dean H, Sellers E, McGavock M, Bruce S, Murray R, Shen G. Lifestyle Intervention on Diet and Exercise Reduced Excessive Gestational Weight Gain in Pregnant Women Under a Randomised Controlled Trial. BJOG 119:70-77, 2012 (PMID: 22017967).
2. Wittmeier KDM, Wicklow BA, MacIntosh AC, Sellers EA, Ryner LN, Serrai H, Gardiner PF, Dean HJ, McGavock JM. Hepatic Steatosis and Low Cardiorespiratory Fitness in Youth with Type 2 Diabetes. Obesity (Silver Spring) 20:1034-1040, 2012 (PMID: 2222927).
3. Wittmeier KDM, Wicklow BA, Sellers EAC, Griffith ATR, Dean HJ, McGavock JM. Success with Lifestyle Monotherapy in Youth with New-Onset Type 2 Diabetes. Paediatr Child Health 17(3):129-132, 2012.
4. Wicklow BA, Wittmeier KD, MacIntosh AC, Sellers EA, Ryner L, Serrai H, Dean HJ, McGavock JM. Metabolic Consequences of Hepatic Steatosis in Overweight and Obese Adolescents. Diabetes Care 35(4):905-910, 2012 (PMID: 22357180).
5. Amed S, Hamilton JK, Sellers EAC, Panagiotopoulos C, Hadjiyannakis S, Sha BR, Booth GL, Laubscher TA, Dannenbaum D, Dean H. Differing Clinical Features in Aboriginal vs non-Aboriginal Children Presenting with Type 2 Diabetes. Pediatr Diabetes 2012 Feb 27. doi: 10.1111/j.1399-5448.2012.00859.x. (PMID: 22369184).
6. Sellers EAC, Wicklow BA, Dean HJ. Clinical and Demographic Characteristics of Type 2 Diabetes in Youth at Diagnosis in Manitoba and Northwestern Ontario (2006-2011). Can J Diabetes 36:114-118, 2012.
7. Dart AB, Sellers EA, Martens PJ, Rigatto C, Brownell MD, Dean HJ. High Burden of Kidney Disease in Youth-Onset Type 2 Diabetes. 35(6):1265-71, 2012 (PMID: 22432116).
8. Spence J, Goodwin B, Enns C, Vecherya N, Dean HJ. Patient Safety Education: An Exploration of Student-Driven Contextual Learning. J Nurs Educ 51(8):466-70, 2012 (PMID: 22694669).
9. Amed S, Hamilton JK, Sellers EAC, Hadjiyannakis S, Panagiotopoulos C, Shah BR, Booth GL, Laubscher TA, Dannenbaum D, Dean H. Type 2 Diabetes in Canadian Aboriginal Children and Youth at Diagnosis: A Population-based Study. Pediatr Diab (in press).
10. Amed S, Hamilton JK, Sellers EAC, Panagiotopoulos C, Hadjiyannakis S, Sha BR, Booth GL, Laubscher TA, Dannenbaum D, Dean H. Differing Clinical Features in Aboriginal vs non-Aboriginal Children Presenting with Type 2 Diabetes. Pediatr Diabetes 2012 Feb 27. doi: 10.1111/j.1399-5448.2012.00859.x. (PMID: 22369184).

11. Van Wallegghem N, MacDonald CA, Dean HJ. Transition of Care for Young Adults with Type 1 and 2 Diabetes. *Pediatr Ann* 41(5):e16-20, 2012 (PMID: 22587508).
12. Sellers EAC, Dean HJ. Clinical and Demographic Characteristics of Youth with Type 2 Diabetes in Diagnosis. *Can J Diab* (in press).
13. Dart AB , Sellers EA , Dean HJ. Kidney disease and youth onset type 2 diabetes: considerations for the general practitioner. *International journal of pediatrics* 2012

Gordon, Joe (2)

1. Wang, E., Biala, A., Gordon, J.W., and Kirshenbaum, L.A. (2012). Autophagy in the Heart: Too much of a good thing? *Journal of Cardiovascular Pharmacology* 60, 110-7.
2. Pagiatakis, C.*, Gordon, J.W.*, Ehyai, S., & McDermott, J.C. (2012). A novel RhoA-myocyte enhancer factor 2 dependent signalling pathway regulating vascular smooth muscle cell gene expression. *Journal of Biological Chemistry*. 287,8361-70.

Hatch, Grant (5)

1. Mulligan, C.M., Sparagna, G.C., Le, C.H., De Mooy, A.B., Holmes, M.G., Hickson-Bick, D.L., Zarini, S., Murphy, R.C., Xu F.Y., HATCH, G.M., McCune, S.A., Moore, R.L. and Chicco, A.J. (2012) Dietary linoleate preserves cardiolipin and attenuates mitochondrial dysfunction in the failing rat heart. *Cardiovasc. Res.* 94, 460-468.
2. Christie, D.A., Mitsopoulos, P., Blagih, J., Dunn, S.D., St-Pierre, J., Jones, R.G., HATCH, G.M., Madrenas, J. (2012) Stomatin-like Protein 2 Deficiency in T Cells Is Associated with Altered Mitochondrial Respiration and Defective CD4+ T Cell Responses. *J. Immunol.* 189, 4349-4360.
3. Taylor, W.A., Mejia, E.M., Mitchell, R.W., Choy, P.C., Sparagna, G.C. and HATCH, G.M. (2012) Human trifunctional protein alpha links cardiolipin remodeling to beta-oxidation. *PLOS ONE* (*in press*). Accepted Oct 2.
4. On, N., Mitchell, R.W., Savant, S.D., Bachmeier, C.J., HATCH, G.M. and Miller, D.W. (2012) Examination of Blood-Brain Barrier (BBB) Integrity In A Mouse Brain Tumor Model. *J. Neuro-Oncology* (*in press*).
5. Chang, W., Zhang, M., Li, J., Meng, Z., Xiao, D., Wei, S., Chen, L., Wang, C.Y. and HATCH, G.M. (2012) Berberine attenuates ischemia-reperfusion injury via regulation of adenosine-5'-monophosphate kinase activity in both non-ischemic and ischemic areas of the heart. *Cardiovasc. Drug. Ther.* (*in press*).

McGavock, Jonathan (11)

1. Forbes L, Downs S, Fraser S, Majumdar S, Plotnikoff R, Ball G, Wozny P, Torrance B, Lewanczuk R, McGavock J, McCargar L. Dietary and Physical Activity Diabetes Risk Factors and Insulin Sensitivity Among Alberta Adolescents. The Healthy Hearts Cohort Study. Submitted to *APNM*. In Press
2. Protudjer J, Kozyrskyj A, McGavock JM, Becker A. Asthma is Associated with Increased Screen Time in Youth Aged 8-10 yrs. Submitted to *Journal of Pediatrics* In Press

3. Comte M, Hobin H, Plotnikoff R, Majumdar S, McGavock JM and MIPASS and Healthy Hearts Investigator Teams. Patterns of Physical Activity in Youth from Two Canadian Provinces. *Applied Physiology Nutrition and Metabolism*. March 2012. In Press.
4. Hay J, Maximova K, Durksen A, Rinaldi R, Torrance B, Ball GD, Majumdar S, Plotnikoff R, Veugelers P, Boule N, Wozny P, McCargar L, Downs S, Lewanczuk R, McGavock JM. Vigorous and not moderate or light physical activity is independently associated with cardiometabolic risk in youths. Submitted to *Arch Ped. Adol. Med.* 2012. In Press.
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6. Wicklow B, Wittmeier K, Macintosh A, Sellers E, Dean H, Ryner L, McGavock JM. Metabolic consequences of hepatic steatosis in overweight youth. *Diabetes Care*. 2012;35(4):905-10.
7. Wittmeier K, Wicklow B, Macintosh A, Sellers E, Dean H, Ryner L, McGavock J. Low fitness is a characteristic feature of type 2 diabetes mellitus in youth. *Obesity*. 2012;20(5):1034-40
8. Trembath D, Macintosh A, Becker A, Kozyrskyj A, McGavock J. The association between physical activity and arterial stiffness in 12-13 yr olds. Submitted to *J. Phys Act Health*. In press 2012
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10. Vander Ploeg K, Wu B, McGavock J, Veugelers P. Physical Activity among Canadian Children on School Days and Non-School Days. In Press. *Journal of Physical Activity and Health*. 2012 Dec 27 E-Pub.
11. Wittmeier K, Wicklow B, Griffith A, Sellers E, Dean H, McGavock J. Determinants of successful glycemic control with lifestyle management in youth with type 2 diabetes. *Pediatrics & Child Health*. 2012; 17:129-132.

Sellers, Elizabeth (7)

1. Schroth R , Jeal N ,Kliwer E , Sellers E. The relationship between vitamin d and severe early childhood caries: a pilot study. *International journal for vitamin and nutrition research. Internationale Zeitschrift für Vitaminund Ernährungsforschung. Journal international de vitaminologie et de nutrition.* 82 1 2012 Jan
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'tJong, Geert (6)

1. 't Jong GW. In vivo inferiority of generic product compared to branded vancomycin; a paradigm shift. *Ther Drug Mon* 2012 34(1):2-3
2. Schuemie MJ, Sen E, 't Jong GW, van Soest EM, Sturkenboom MCJM, Kors JA. Automating classification of free-text electronic health records for epidemiological studies. *Pharmacoepidemiol Drug Saf*. 2012 Jan 24.
3. 't Jong GW, Einarson T, Koren G, Einarson A. Antidepressant Use in Pregnancy and Persistent Pulmonary Hypertension of the Newborn (PPHN): A systematic review. Accepted
4. Ferrajolo C, Verhamme K, Trifiró G, 't Jong G, Picelli G, Oteri A, De Bie S, Valkoff V, Mazzaglia G, Rossi F, Capuano A, Sturkenboom MCJM. Incidence of potential drug-induced liver injury in children: a retrospective cohort study in two European Countries. Submitted
5. GW Jong, R Hackmon, P Madadi, S Ito, G Koren. Translation of pharmacogenomic information from bench to patient. Submitted
6. Tanoshima, 't Jong, Merlocco, Simpson, Friedman, Colantonio, Koren. A Child Exposed to Primidone Not Prescribed For Her. *Therapeutic Drug Monitoring*, Accepted

Wicklow, Brandy (3)

1. Wittmeier KD ,Wicklow BA ,MacIntosh AC ,Sellers EA , Ryner LN, Serrai H , Gardiner PF , Dean HJ, McGavock JM. Hepatic steatosis and low cardiorespiratory fitness in youth with type 2 diabetes. *Obesity (Silver Spring, Md.)* 20 5 2012 May
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Wittmeier, Kristy (5)

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