

## **Appendix 2: FUNDING RECEIVED or CONTINUING** **between May 1, 2015 – April 30, 2016**

### **Adegoke, Olasunkanmi A. J.**

#### **Funding Received:**

NSERC Discovery Grant

Title: “Mechanisms of regulation of skeletal muscle mass and growth”

5 years

### **Backx, Peter H.**

#### **Funding Received:**

NSERC CHRP grant (M. Radisic PI, P. Backx co-PI, Kumar coPI)

Platform technology for maturation of human stem cell derived cardiomyocytes and cardiotoxicity screening

290,000 3 years

Start June 2016

CIHR Operating grant (P. Backx PI)

Next Generation Stem Cell for the heart

780,000 5 years

Start Oct 2015

CIHR Operating grant (P. Backx PI)

Regulation of contractility by NCX and Ito

580,000 5 years

Start March 2013

CIHR Operating grant (P. Backx PI)

Mechanisms of Atrial Fibrillation induced by exercise

805,000 5 years

Start March 2012

CIHR Operating grant (CC Hui PI, P. Backx co-PI)

Mechanisms for regulation of the cardiac conduction system by homeobox transcription factors

899,000 10 years

Start March 2009

### **Birot, Olivier**

#### **Funding Received:**

Heart and Stroke, Grant-in-Aid, Co-applicant with Drs. Haas and Ellis, \$266,211 / 3 years (2015-2018), Awarded.

**Ceddia, Rolando B.**

**Funding Received:**

NSERC, Discover Grant (\$160,000)  
Operating Funding - Awarded (Principal Applicant)  
Regulation of whole-body energy homeostasis  
Term of funding: 2016 - 2020

NSERC RTI (Co-applicant)  
Biomolecular Imager for analysis of cellular and viral proteins and nucleic acids.

NSERC RTI (Co-applicant)  
Automated multi-channel fluorescence imaging system for extended time lapse and image stitching analyses. \$121,539

**Drake, Janessa D. M.**

**Funding Received:**

NSERC Discovery Grant  
May 2012- Apr 2017  
Thoracic and Lumbar Spine Biomechanics  
\$29,000/year

**Funding Applied For:**

CFI JELF (Sole Investigator)  
Decision Announced June 2016  
Understanding the spine through the use of dynamic interactive virtual reality based testing environments  
Total Project Cost: \$472,493 (\$150,000 requested from CFI)

**Edgell, Heather**

**Funding Received:**

CFI John R. Evans Leaders Fund - \$100,000 – Women's cardiovascular health: sexually dimorphic cardiovascular and autonomic responses to stressors

CFI-Infrastructure Operating Fund - \$4,000

Ontario Research Fund- \$100,000 – Women's cardiovascular health: sexually dimorphic cardiovascular and autonomic responses to stressors

Junior Faculty Award - \$2,000 – Chemoreflex function in the supine and upright postures in men and women throughout the menstrual cycle

Conference Travel Award - \$1,000 – APS Conference: Cardiovascular, Renal and Metabolic Disease in Annapolis, MD.

NSERC Discovery Grant - \$120,000 over 5 years – Cerebrovascular and ventilatory responses to autonomic reflex stimulation in supine and upright postures in women throughout the menstrual cycle and men

**Funding Applied For:**

James H. Cummings Foundation - \$49,777 USD

J. P. Bickell Foundation - \$64,884

**Haas, Tara L.**

**Funding Received:**

2013-2017

CIHR Operating Grant \$390,800 total funding (4 years) (PI; 1 Co-applicant: E. Roudier)  
“Microvascular remodeling of the adipose and muscle tissues in diet-induced obesity: regulation by FoxO proteins”

2013-2018

NSERC Discovery Grant (renewal); \$165,000 total funding (5 years) “Regulation of capillary sprouting and stabilization in skeletal muscle”

2015-2018

Heart and Stroke Research Foundation of Canada \$266,211 total funding (3 years); “Regulators of angiogenesis in peripheral limb ischemia” PI – Tara Haas; Co-applicants: C. Ellis (UWO) and O. Birot

2015

NSERC Research Tools and Instrumentation; \$150,000 (PI: C. Perry; co-applicants: Haas, Hood, Ceddia, Riddell, Scime) “A core in vivo microCT imaging system for analyzing body composition, circulation and cardiorespiratory function in rodents”

**Hood, David A.**

**Funding Received:**

Natural Science and Engineering Research Council of Canada Research Tools and Instruments Grant entitled: “in vivo CT Imager” (\$150,000) (Co-applicant, PI, C. Perry)

Canadian Institutes for Health Research (CIHR) Research Grant entitled "Mitochondria in Aging Skeletal Muscle" (117,937 per year).

Canadian Institutes for Health Research (CIHR) Research Grant entitled "Autophagy in skeletal muscle" (103,661 per year).

Natural Science and Engineering Research Council of Canada Discovery Grant entitled: “Mitochondrial Biogenesis in Skeletal Muscle” (\$110,000 per year).

Pan Am Parapan 2015 Minor grant to support Muscle Health Awareness Day (MHAD6) (\$2000)

**Hynes, Loriann**

**Funding Received:**

2016 York University Faculty of Health Minor Research Grant

2016 York University Faculty of Health Junior Faculty Funds

**Funding Applied For:**

2016 NOCSAE Pilot Study Grant (Letter of Intent Submitted)

**Kuk, Jennifer L.**

**Funding Received:**

Predictors of Back Pain: Longitudinal Follow-up of Nursing Students, York University, Faculty of Health Minor Research Grant (2014-2016) - \$3,000 (Principal Investigator).

Developing and Validating the Readiness and Motivation Interview for Families (RMI-Family) Managing Pediatric Obesity (CIHR – Co-Investigator, PI: Geoff Ball, U of Alberta; 2014-18: \$627,877)

Causes and Implications of Metabolically Healthy Obese. Canadian Institutes of Health Research – New Investigator Bridge Funding (2013-2015 - #131594): \$100,000 (Co-PI)

Resistance and Cardiorespiratory Time-matched Exercise in Youth: A Randomized Clinical Trial (RCT:RCT). National, Heart, Lung, and Blood Institute, 2013-2017 - 1R01HL114857-01A1: \$5,587,453 (Co-Investigator).

**McDermott, John C.**

**Funding Received:**

2013-2018 CIHR operating grant, \$578,000 Regulation of MEF2 in cardiac and skeletal muscle cells

2013-2018 CIHR operating grant, \$542,000 Role of Smad7 in Cardiac and Skeletal muscle

2012-2017 NSERC Discovery grant, \$150,000 Role of AP-1 in skeletal myogenesis

**Perry, Christopher G. R.**

**Funding Received:**

NSERC Research Tools and Instruments Grant (P.I.).

Title: A core in vivo microCT imaging system for analyzing body composition, circulation and cardiorespiratory function in rodents. April 1, 2015.

Co P.I.s: Rolando Ceddia, Michael Riddell, Anthony Scime, David Hood, Tara Haas, \$150,000

**Riddell, Michael C.**

**Funding Received:**

JDRF Operating Grant. \$286,920.04 (10/01/2014 - 09/30/2016). Project title: Preclinical drug development of somatostatin receptor 2 antagonists for the prevention of recurrent hypoglycemia in type 1 diabetes. Grant JDRF 2-SRA-2014-268-M-R.

NSERC Discovery Grant (individual- 3<sup>rd</sup> renewal). \$165,000 (2013-2017), Project Title: Examining the mechanisms for the lipolytic and antilipolytic effects of glucocorticoids in adipose tissue. Grant #261306

NIH Operating Grant #1DP3DK101075-01: Control systems for Artificial Pancreas use during and after exercise. \$2,478,076 (2013-2017)- Subcontract to York= \$364,000.

**Roudier, Emilie**

**Funding Received:**

Grant for science and technology, Consulate general of France in Toronto.

To support the organization of a symposium “New technologies and cardiovascular health: a global perspective from EHealth, bioinformatics to rehabilitation”, November 5th-6th 2015. 4,000 Euros.

Co-applicant on CIHR Operating Grant 2013-2017:

Microvascular remodeling of the adipose and muscle tissues in diet-induced obesity: regulation by FoxO proteins.

Principal investigator Dr. Tara Haas, Funding: 400K CAD for 4 years.

**Scime, Anthony**

**Funding Received:**

NSERC Discovery Grant 2012 (\$125,000 for 5 years)

**Funding Applied For:**

CDA “Targeting stem cells to improve metabolic disorders” 3 years \$300,000

CIHR “Controlling stem cell fates: A role for bioenergetics” 5 years \$900,000

**Tsushima, Robert**

**Funding Received:**

2014.09 – 2016.08

Infrastructure Operating Funding

Canadian Foundation for Innovation - \$37,877 (total)

**Funding Applied For:**

2016.07 – 2019.06

SNARE Protein Regulation of Cardiac Ion Channels and ANF Secretion

Principal Investigator: Robert G. Tsushima  
Heart and Stroke Foundation of Ontario - \$300,000 (total)

2016.07 – 2019.06

Role of Endogenous Cholesterol in Beta-Cell Stimulus-Secretion Coupling

Principal Investigator: Robert G. Tsushima

Canadian Diabetes Association - \$300,000 (total)

### **Appendix 3: AWARDS RECEIVED between May 1, 2014 – April 30, 2015**

#### **Backx, Peter H.**

CFI Awards: John Evans Leaders Award, Toronto Cardiovascular Assessment Centre, 2015:  
York University

John Foester Distinguished Lecture Award, ICS, St Boniface Hospital

Canada Research Chair in Cardiovascular Biology, York University (Jan 2016)

#### **Hood, David A.**

Canadian Society for Exercise Physiology (CSEP) John R. Sutton Lecturer, October 2015

Vainshtein, A., L.D. Tryon, M. Pauly, and D.A. Hood. The role of PGC-1 $\alpha$  during acute exercise-induced autophagy and mitophagy in skeletal muscle. Am. J. Physiol. Cell Physiol. 308:C710-C719, 2015. This paper was named “Paper of the Year” in this journal for 2015 by the American Physiological Society.

#### **Kuk, Jennifer L.**

TOPS New Investigator Award – Canadian Obesity Network (2015)

## **Appendix 4: Peer-reviewed publications and submitted manuscripts by MHRC Faculty members between May 1, 2015 – April 30, 2016**

### **Adegoke, Olasunkanmi A. J.**

Adegoke OA, Bates HE, Kiraly MA, Vranic M, Riddell MC, Marliss EB. Exercise in ZDF rats does not attenuate weight gain, but prevents hyperglycemia concurrent with modulation of amino acid metabolism and AKT/mTOR activation in skeletal muscle. *Eur J Nutr.* 2015 Aug;54(5):751-9.

### **Backx, Peter H.**

Aschar-Sobbi R, Izaddoustdar F, Korogyi AS, Farman GP, Dorian D, Simpson JA, Tuomi JM, Nanthakumar N, Cox B, Dorian P, Backx PH. Increased atrial arrhythmia susceptibility induced by intense endurance exercise requires TNF $\alpha$ . *Nature Communications* 6:6018-6028, 2015.

Redpath CJ, Backx PH. Atrial fibrillation and the athletic heart. *Curr Opin Cardiol.* 30:17-23, 2015.

Liu J, Kim KH, Morales MJ, Heximer SP, Hui CC, Backx PH. Kv4.3-Encoded Fast Transient Outward Current Is Presented in Kv4.2 Knockout Mouse Cardiomyocytes. *PLoS One.* 10(7):e0133274, 2015.

Dadson K, Turdi S, Hashemi S, Zhao J, Polidovitch N, Beca S, Backx PH, McDermott JC, Sweeney G. Adiponectin is required for cardiac MEF2 activation during pressure overload induced hypertrophy. *J Mol Cell Cardiol.* 86:102-9, 2015.

Chung YW, Lagranha C, Chen Y, Sun J, Tong G, Hockman SC, Ahmad F, Esfahani SG, Bae DH, Polidovitch N, Wu J, Rhee DK, Lee BS, Gucek M, Daniels MP, Brantner CA, Backx PH, Murphy E, Manganiello VC. Targeted disruption of PDE3B, but not PDE3A, protects murine heart from ischemia/reperfusion injury. *Proc Natl Acad Sci U S A.* 112(17):E2253-62, 2015.

Cordeiro JM, Calloe K, Aschar-Sobbi R, Kim KH, Korogyi A, Occhipinti D, Backx PH, Panama BK. Physiological roles of the transient outward current I<sub>to</sub> in normal and diseased hearts. *Front Biosci (Schol Ed).* 8:143-59, 2016.

Kim KH, Rosen A, Hussein SMI, Puvindran V, Korogyi AS, Chiarello C, Nagy A, Hui CC, Backx PH. Irx3 is required for postnatal maturation of the mouse ventricular conduction system. *Scientific Reports* 20;6:19197, 2016

Panama BK, Korogyi AS, Aschar-Sobbi A, Oh Y, Gray CBB, Gang H, Brown JH, Kirshenbaum LA, Backx PH. Reductions in the cardiac transient outward K<sup>+</sup> current I<sub>to</sub> caused by chronic  $\beta$ -adrenergic receptor stimulation are partly rescued by inhibition of nuclear factor kappaB. *JBC* 19;291(8):4156-65, 2016.

Liu J, Laksman Z, Backx PH. The Electrophysiological Development of Cardiomyocytes. *Adv Drug Delivery Reviews*, 96:253-73, 2016

Olofsson PS, Steinberg B, Sobbi R, Cox MA, Ahmed MN, Oswald M, Szekeres M, Hanes WN, Introini A, Liu SF, Holodick NE, Rothstein TL, Lövdahl C, Chavan SS, Yang H, Pavlov VA, Broliden K, Andersson U, Diamond B, Miller EJ, Arner A, Gregersen PK, Backx PH, Mak TW Tracey KJ. Hypertension in Mice with Deletion of Choline 1 Acetyltransferase+ CD4+ Lymphocytes. Revised submitted: *Nature Methods*.

Oudit GY, Backx PH.. Amlodipine Therapy for Iron-Overload Cardiomyopathy: The Enduring Value of Translational Research. *Can J Cardiol*. 2015 Nov 26. pii: S0828-282X(15)01620-7. doi: 10.1016/j.cjca.2015.11.017.

### **Birot, Olivier**

Aiken J, Roudier E, Ciccone J, Drouin G, Stromberg A, Vojnovic J, Olfert IM, Haas T, Gustafsson T, Grenier G, Birot O. Phosphorylation of murine double minute-2 on Ser166 is downstream of VEGF-A in exercised skeletal muscle and regulates primary endothelial cell migration and FoxO gene expression. *FASEB J* 2006, [In press]

Pelletier J, Roudier E, Abraham P, Fromy B, Saumet JL, Birot, O, Sigaucho-Roussel D. VEGF-A promotes both pro-angiogenic and neurotrophic capacities for nerve recovery after compressive neuropathy in rats. *Molecular Neurobiology*, 51: 240-251, 2015.

### **Ceddia, Rolando B.**

Sepa-Kishi DM, Ceddia RB. Exercise-Mediated Effects on White and Brown Adipose Tissue Plasticity and Metabolism. *Exerc Sport Sci Rev*. 2016 Jan;44(1):37-44.

### **Connor, Michael K.**

Theriau CF, Shpilberg Y, Riddell MC, Connor MK. Voluntary Physical Activity Abolishes the Proliferative Tumor Growth Microenvironment Created by Adipose Tissue in Animals Fed a High Fat Diet. *J Appl Physiol (1985)*. 2016 May 5:jap.00862.2015. doi: 10.1152/jap.00862.2015. [Epub ahead of print]

### **Drake, Janessa D.M.**

Schinkel-Ivy, A., Drake, J.D.M. Breast size impacts postural muscle activation and spine motion. *Journal of Back and Musculoskeletal Rehabilitation*, 2016 Feb 19. [Epub ahead of print] PMID: 26966826

Nairn, B.C., Sutherland, C.A., Drake, J.D.M. Location of instability during a bench press alters movement patterns and electromyographical activity. *Journal of Strength and Conditioning*, 2015 Nov; 29(11): 3162-3170.PMID: 25932979



Schinkel-Ivy, A., Drake, J.D.M. Sequencing of superficial trunk muscle activation during range-of-motion tasks. *Human Movement Science*, 2015 Oct; 43: 67-77, 2015. PMID: 26209971

Ang, C., Nairn, B.C., Schinkel-Ivy, A., Drake, J.D.M. Seated maximum flexion: An alternative to standing maximum flexion for determining presence of flexion-relaxation? *Journal of Back and Musculoskeletal Rehabilitation*, 2015 Sep 6. [Epub ahead of print]. PMID: 26406200

### **Edgell, Heather**

Edgell H, Stickland MK, and MacLean JE (2016) A simplified measurement of pulse wave velocity is not inferior to standard measurement in young adults and children. *Blood Press Monit* 2016 Feb 22 [Epub ahead of print]

Edgell H, McMurtry MS, Haykowsky MJ, Paterson I, Ezekowitz JA, Dyck JR, and Stickland MK (2015) Peripheral chemoreceptor control of cardiovascular function at rest and during exercise in heart failure patients. *JAP* 118(7): 839-48

Stickland MK, Fuhr DP, Edgell H, Byers BW, Bhutani M, Wong EYL, and Steinback CD. Chemosensitivity, cardiovascular risk, and the ventilatory response to exercise in Chronic Obstructive Pulmonary Disease. PONE-D-15-54698 [in review]

Edgell H, Moore LM, Chung C, Byers BW, and Stickland MK. Short-term cardiovascular and autonomic effects of inhaled salbutamol. *RESPNB3456R1* [in review]

### **Gage, William H.**

Kiriella JB, Perry CJ, Hawkins KM, Shanahan CJ, Gage WH, Moore AE. Sagittal plane lumbar loading when navigating an obstacle and carrying a load. *Ergonomics*. 2016 Apr 8:1-9.

### **Haas, Tara L.**

J. Aiken, E. Roudier, J. Ciccone, G. Drouin, A. Stromberg, J. Vojnovic, I. M. Olfert, T.L. Haas, T. Gustafsson, G. Grenier, O. Birot. Phosphorylation of Murine Double Minute-2 on Ser166 is downstream of VEGF-A in exercised skeletal muscle and regulates primary endothelial cells migration and FoxO gene expression. Accepted *FASEB J.*, Nov. 2015; fj.15-276964

Haas, T.L. and E. Nwadozi. Regulation of Capillary Growth in Skeletal Muscle in Exercise and Disease. (*Invited review*) *Applied Physiology, Nutrition and Metabolism*. 2015 Dec;40(12):1221-32. doi: 10.1139/apnm-2015-0336; *Based on CSEP President's award lecture 2013.*

### **Hamadeh, Mazen J.**

Parikh S, Hamadeh MJ, Kuk JL. Estimating Serving Sizes for Healthier and Unhealthier Versions of Food According to Canada's Food Guide. *Can J Diet Pract Res*. 2015 Dec;76(4):204-7.

Moghimi E, Solomon JA, Gianforcaro A, Hamadeh MJ. Dietary Vitamin D3 Restriction Exacerbates Disease Pathophysiology in the Spinal Cord of the G93A Mouse Model of Amyotrophic Lateral Sclerosis. *PLoS One*. 2015 May 28;10(5):e0126355.

### **Hood, David A.**

Hood, D.A., L.D. Tryon, H.N. Carter, Y. Kim and C.C.W. Chen. Unraveling the mechanisms regulating muscle mitochondrial biogenesis. *Biochem. J*. 2016 (in press).

Erlich, A.T., L.D. Tryon, M.J. Crilly, J. M. Memme, Z. S. Mesbah Moosavi, A.N. Oliveira, K. Beyfuss and D.A. Hood. Function of specialized regulatory proteins and signaling pathways in exercise-induced muscle mitochondrial biogenesis. *Integr. Med. Res*. 6:000-000, 2016 (in press).

Memme, J., A. Oliveira and D.A. Hood. The chronology of UPR activation in skeletal muscle adaptations to chronic contractile activity. *Am. J. Physiol. Cell Physiol*. 2016 Apr 27:ajpcell.00009.2016. doi: 10.1152/ajpcell.00009.2016. [Epub ahead of print]

Vainshtein, A. and D.A. Hood. The regulation of autophagy during exercise in skeletal muscle. *J. Appl. Physiol*. 120(6): 664-673, 2016.

Hood, D.A., L.D. Tryon, A.Vainshtein, J. Memme, C. Chen, M. Pauly, M.J. Crilly and H. Carter, Exercise and the Regulation of Mitochondrial Turnover. In: Claude Bouchard (Ed.), *Progress in Molecular Biology and Translational Science*, 135: 99-127, 2015.

Tryon, L.D., M.J. Crilly and D.A. Hood. Effect of denervation on the regulation of mitochondrial transcription factor A expression in skeletal muscle. *Am. J. Physiol. Cell Physiol*. 309: C228-38, 2015.

Collu-Marchese, M., M. Shuen, M. Pauly, A. Saleem and D.A. Hood. The regulation of mitochondrial transcription factor A (Tfam) expression during skeletal muscle cell differentiation. *Bioscience Reports* 35: e00221, DOI: 10.1042/BSR20150073, 2015.

Carter, H.N., C.C.W. Chen and D.A. Hood. Mitochondria, Muscle Health and Exercise with Advancing Age. *Physiology* 30:208-223, 2015.

Vainshtein, A., E.M. Desjardins, A. Armani, M. Sandri, and D.A. Hood. PGC-1 $\alpha$  modulates denervation-induced mitophagy in skeletal muscle. *Skeletal Muscle* 5:9, 2015. [Biomed central statistics reveal that this article was accessed 2300 times in 4 months between March and June, 2015]

Vainshtein, A., L.D. Tryon, M. Pauly, and D.A. Hood. The role of PGC-1 $\alpha$  during acute exercise-induced autophagy and mitophagy in skeletal muscle. *Am. J. Physiol. Cell Physiol.* 308:C710-C719, 2015.

Zhang, Y., L.D. Tryon and D.A. Hood. Absence of Bax and Bak: Implications for autophagy and alternative mitochondrial functions. In E. Hayat (Ed.) *Autophagy*, Vol 4. Elsevier, 2015, pp. 155-164.

Tryon, L.D., M. Colavecchia and D.A. Hood. Exercise, muscle and mitochondria: signaling mechanisms, health consequences and new challenges for the future. *J. Student Science and Technology.* 8: 83-92, 2015.

Iqbal, S. and D.A. Hood. Cytoskeletal regulation of mitochondrial movements in myoblasts. *Global Medical Discovery Series*, [ISSN 1929-8536] (<https://globalmedicaldiscovery.com> ). Feb. 2015.

### **Kuk, Jennifer L.**

Kuk JL, Brown RE: Aspartame and sucrose intake is associated with impairments in glucose tolerance in obesity (APNM – *In Press*).

Jiandani D, Wharton S, Kuk JL: Predictors of early attrition in patients attending an obesity-management program: a cross-sectional study (BMC Obesity – *In Press*)

Kuk JL and Wharton S: Differences in Weight Change Trajectory Patterns in a Publicly Funded Adult Weight Management Center (Obesity Science & Practice – *In Press*).

Wharton S, Serodio K, Kuk JL, Sivapalan N, Craik A, Aarts MA, Interest, Views and Perceived Barriers to Bariatric Surgery in Patients with Morbid Obesity (Clinical Obesity – *In Press*).

Heinzle S, Ball GDC, Kuk JL: Prevalence and Predictors of Metabolically Healthy Obese Adolescents (Pediatric Obesity – *In Press*)

Brown RE, Canning KL, Fung MDT, Jiandani D, Riddell M, MacPherson A, Kuk JL: Estimation of Caloric Intake and Exercise Expenditure in Adults (Med Sci Sport Ex – *In Press*)

Ranjbar M, Rotondi MA, Ardern CI, Kuk JL: Polycyclic Aromatic Hydrocarbon Biomarkers are Associated with Metabolic Syndrome, Dyslipidemia, Hypertension and Type 2 Diabetes (PLOS ONE – 2015 Sep 4;10(9):e0137536. doi: 10.1371/journal.pone.0137536. eCollection 2015).

Brown RE, Sharma AM, Ardern CI, Mirdamadi P, Mirdamadi P, Kuk JL: Secular trends in the relationship between caloric intake, carbohydrate intake, and physical activity with obesity (Obesity Research and Clinical Practice – 2015 Sep 14. pii: S1871-403X(15)00121-0. doi: 10.1016/j.orcp.2015.08.007 ).

Ranjbar M, Rotondi MA, Ardern CI, Kuk JL: The Influence of Urinary Concentrations of Organophosphate Metabolites on the Relationship between BMI and Cardiometabolic Health Risk (*Journal of Obesity* – 2015;2015:687914. doi: 10.1155/2015/687914. Epub 2015 Aug 20.).

Parikh S, Hamadeh MJ, Kuk JL: Serving Size Estimation for ‘Healthier’ and ‘Unhealthier’ Versions of Food (*Canadian Journal of Dietetic Practice and Research* – 2015 Oct 9:1-4).

Serodio KJ, Berall G, Flanders D, Rotondi M, Ardern CI, Kuk JL: Effectiveness of a publicly funded clinical paediatric weight management program on obesity outcomes (*Paediatrics & Child Health – In Press*).

Kanagasabai T, Thakkar N, Kuk JL, Churilla JR and Ardern CI: Physical Activity Domains, Guideline Adherence, and Weight History in Metabolically Healthy Obese Adults: NHANES 1999-2006 (*International Journal of Behavioral Nutrition and Physical Activity* – May 16;12(1):64, 2015).

Horner K, Kuk JL, Barinas-Mitchell E, Drant S, DeGroff C, Lee S. Effect of Aerobic versus Resistance Exercise on Pulse Wave Velocity, Intima Media Thickness and Left Ventricular Mass in Obese Adolescents (*Pediatric Ex Sci* – 2015 Jul 14).

Canning KL, Brown RE, Wharton S, Sharma AM, Kuk JL: Edmonton Obesity Staging System Prevalence and Association with Weight Loss in a Community Obesity Clinic (*J Obesity* – 2015;2015:619734. doi: 10.1155/2015/619734. Epub 2015 Apr 28.).

Lee J, Kuk JL, Ardern CI: The Relationship between Changes in Sitting Time and Mortality in Post-Menopausal U.S. Women (*Journal of Public Health* - 2015 May 1. pii: fdv055).

Jiandani D, Kuk JL, Randhawa A, Brown RE, Santa Mina D: The Effect of Cycling on Prostate-Specific Antigen (PSA): A Systematic Review and Meta-Analysis (*Prostate Cancer and Prostatic Diseases* – 2015 Sep;18(3):208-12. doi: 10.1038/pcan.2015.16).

Fung MDT, Canning KL, Mirdamadi P, Ardern CI and Kuk JL: Lifestyle and Weight Predictors of a Healthy Overweight Profile over a 20 Year Follow-Up (*Obesity* – 2015 Jun;23(6):1320-5. doi: 10.1002/oby.21087).

### **McDermott, John C.**

A p38 MAPK regulated MEF2:β-catenin interaction enhances canonical Wnt signalling. Ehyai S, Dionyssiou MG, Gordon JW, Williams D, Siu KW, McDermott JC. *Mol Cell Biol*. 2015 Nov 9.

A conserved MADS-box phosphorylation motif regulates differentiation and mitochondrial function in skeletal, cardiac, and smooth muscle cells.

Mughal W, Nguyen L, Pustynnik S, da Silva Rosa SC, Piotrowski S, Chapman D, Du M, Alli NS, Grigull J, Halayko AJ, Aliani M, Topham MK, Epanand RM, Hatch GM, Pereira TJ, Kereliuk S, McDermott JC, Rampitsch C, Dolinsky VW, Gordon JW. *Cell Death Dis*. 2015 Oct 29;6:e1944.

Heart disease: recruitment of MEF2 activity by  $\beta$ -blockers wards off cardiomyocyte death. Hashemi S, Wales S, Miyake T, McDermott JC. *Cell Death Dis.* 2015 Oct 15;6:e1916.

Pro-survival function of MEF2 in cardiomyocytes is enhanced by  $\beta$ -blockers. S Hashemi, J Salma, S Wales & JC McDermott *Cell Death Discov* 2015; 1: 15019.

Adiponectin is required for cardiac MEF2 activation during pressure overload induced hypertrophy. Dadson K, Turdi S, Hashemi S, Zhao J, Polidovitch N, Beca S, Backx PH, McDermott JC, Sweeney G. *J Mol Cell Cardiol.* 2015 Jul 18.

### **Perry, Christopher G. R.**

Perry CGR, Wright DC. Challenging dogma: Is hepatic lipid accumulation in Type 2 Diabetes due to mitochondrial dysfunction? *In Press, J Physiol.* (Invited editorial)

Edgett BA, Scribbans TD, Raleigh JP, Matusiak JBL, Boonstra K, Simpson CA, Perry CGR, Quadrilatero J, Gurd BJ. The impact of a 48-hour fast on SIRT1 and GCN5 in human skeletal muscle. *In Press, Appl Physiol Nutr Metab*, 2016.

Ydfors M, Hughes MC, Laham R, Schlattner U, Norrbom J, Perry CGR. Modeling in vivo creatine/phosphocreatine in vitro reveal divergent adaptations in human muscle mitochondrial respiratory control by ADP post-exercise. *IN PRESS, J Physiol.* Articles in Press Dec 3, 2015.

Hughes MC, Ramos SV, Turnbull PC, Nejatbakhsh A, Baechler BL, Tahmasebi H, Laham R, Gurd BJ, Quadrilatero J, Kane DA, Perry CGR. Mitochondrial bioenergetics and fibre type assessments in micro biopsy vs Bergstrom percutaneous sampling of human skeletal muscle. *Frontiers in Physiology.* Dec 18;6:360, 2015.

Castellani L, Perry CGR, MacPherson R, Root-McCaig J, Huber J, Arkell A, Simpson J, Wright DC. Exercise mediated IL-6 signaling occurs independent of inflammation and is amplified by training in mouse adipose tissue. *JAPPL.* Dec 1;119(11):1347-54, 2015.

### **Riddell, Michael C.**

Michael C. Riddell and Craig E. Taplin Chapter Title: Exercise in children with type 1 diabetes. In *Research into Childhood-Onset Type 1 Diabetes: From Study Design to Improved Management.* Editors: Andrea E. Scaramuzza, Carine de Beaufort, Ragnar Hanas. Springer in press.

J.E. Yardley and M.C. Riddell. Athletes with Chronic Conditions: Diabetes. In *Fluid Balance, Hydration, and Athletic Performance.* pp 265-290. Editors: F Meyer, Szygula and B. Wilk. CRC Press, 2016

Getting Pumped™: A Guide to Insulin Pump Therapy for Active Individuals with Type 1 Diabetes. Glue Inc. 2016.

Chip Rowan, Michael Riddell, Norman Gledhill and Veronica Jamnik. Community-based physical activity intervention targeting populations at high risk for type 2 diabetes through culturally-preferred physical activity by detecting changes in glycemic control using glycated hemoglobin (A1C). *Canadian Journal of Diabetes*. (in press).

Leclair E, Liggins RT, Peckett AJ, Teich T, Coy DH, Vranic M, Riddell MC. Glucagon responses to exercise-induced hypoglycaemia are improved by somatostatin receptor type 2 antagonism in a rat model of diabetes. *Diabetologia*. 2016 Apr 13. [Epub ahead of print] PubMed PMID: 27075449.

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## **Appendix 5: Additional Specialized Equipment**

**Hynes, Loriann**

GE LOGIQ e Duplex Doppler Ultrasound Unit for vascular and musculoskeletal evaluation

**Perry, Christopher G. R.**

Bruker Skyscan 1278 *in vivo* microCT imager for body composition in mice/rats

4 Oroboros high-resolution respirometers

2 PTI high resolution spectrofluorometers