

Annual Report
Division of Endocrinology
Department of Medicine - Jewish General Hospital
January 1 - December 31, 2016

SUMMARY

Introduction

The Division of Endocrinology and Metabolism has continued its pursuit of excellence in patient care, research and training.

Clinical Activities:

Endocrinology is largely an outpatient specialty. Including the Gestational Diabetes Clinic and Bone and Osteoporosis Clinics that do not function in our premises, the number of visits per year exceeded the 26,600. Outpatient clinics are run around the week by GFT's. Non-GFT's run clinics on Monday and Thursday mornings. The increase in the number of patients is still too long. Constraints result from the RAMQ that is trying to restrict the number of endocrinologists. This problem has been solved at the expense of physician scientists increasing their clinical hours, reducing their research time. We also have established a triage system to see first those patients in most urgent need (e.g. decompensated diabetics, thyrotoxic patients). We have stretched to the limits the secretarial time available, which has not increased in over 7 years in spite the doubling of the numbers of patient visits. Although all staff physicians see patients spanning the whole spectrum of endocrine and metabolic diseases, some clinics are focused on a particular condition, as shown in the table below.

In-patient activities are centered on the Endocrine Consulting Service, attended by our staff physicians in a 2-week rotating schedule through the year. The endocrine service is largely covered by 9 of the 11 GFT's, which burdens them – including the physician scientists- with a minimum of 6 weeks per year. Volume of consults is approximately 1200/year. In addition, our staff is actively involved in CTU rotations. The Division does not have assigned beds and endocrine patients are admitted to general wards.

The Survival Skills Program of self-management education for patients with diabetes has continued to function regularly with private donations. No additional resources have been provided this year for the essential program.

Outpatient Clinics:

Monday AM: Diabetic Clinic (Kader); General Endocrinology (Tamilia, Karaplis, Trifiro, Schweitzer)

Monday PM: General Endocrinology (Karaplis, Trifiro Assimakopoulos, Schweitzer,)

Tuesday AM: Thyroid (Tamilia); General Endocrinology (Assimakopoulos, Christopoulos, Kader, Schiffrin)

Tuesday PM: General Endocrinology (Assimakopoulos, Schiffrin, Richards)

Wednesday AM: General Endocrinology (Majdan, Karaplis, Tamilya, Schweitzer); Diabetic Foot Care (Dr. R. Chaytor); Osteoporosis I (Trifiro); Gestational Diabetic, Pav. H (Kader)
Wednesday PM: General Endocrinology (Richards, Majdan); Osteoporosis II (Karaplis); Lipid Clinic (Schweitzer)

Thursday AM: General Endocrinology (Schiffrin, Tamilya, Christopoulos, Assimakopoulos);
Thursday PM: General Endocrinology (Schiffrin Assimakopoulos, Schweitzer, Yu)

Friday AM: General Endocrinology (Schweitzer, Trifiro, Christopoulos, Majdan, Yu)
Friday PM: General Endocrinology (Trifiro, Yu)

Out Patient Clinic	Half Days Per Week
Assimakopoulos	5 half days per week;
Christopoulos	4 ½ days per week;
Kader	4 days per week
Karaplis	2 ½ days per week
Majdan	5 ½ days per week
Richards	2 half days per week
Schiffrin	4 half days per week
Schweitzer	5 half days per week
Tamilya	9 half days per week
Trifiro	4 half days per week
Yu	3 to 4 half days per week

1. Research and publications:

Research projects and publications are listed under Section II. Research activities and publications continue on the rise (see individual reports for details).

2. Teaching and learning (undergraduate and graduate):

The Division has continued to play an active role in joint activities with the other McGill Hospitals counterparts, such as Med-I Endocrine Physiology Course and Calcium Homeostasis, as well as hosting the Lipid-, Thyroid McGill Lectureships.

Our members continue to teach in McGill Graduate and Undergraduate courses such as Physiology, Advanced Endocrinology and Neuroendocrinology.

Dr. Michael Tamilya has continued to receive the recognition of our young colleagues and students as a truly exceptional teacher. Drs. Tina Kader and Morris Schweitzer continue to be remarkably active in CME activities primarily addressed to general practitioners, internists and specialists.

Overall, the Division of Endocrinology is one of the most active in contributing its staff to teaching (Professional Skills and Introduction to Internal Medicine and Physiology), Clinical Teaching Unit (CTU) and Consult Service coverage within the Department of Medicine at the Jewish General Hospital:

Clinical Teaching Unit (CTU)	Weeks Per Year
Christopoulos	2 weeks
Karaplis	4 weeks
Majdan	4 weeks
Tamilia	8 weeks
Trifiro	4 weeks

Consult Service	Weeks Per Year
Assimakopoulos	6 weeks
Christopoulos	6 weeks
Karaplis	4 weeks
Majdan	5 weeks
Richards	6 weeks
Tamilia	2 weeks
Trifiro	13 weeks
Yu	12 weeks

Research Trainees Supervision

Kader: Masters student for project presented at Canadian Diabetes Association

Karaplis: In Collaboration with Dr. Mark Lipman, supervised postdoctoral fellows: Drs. Xiuying Bai, Dibeyendu Panda and Hans Christian Zaun

Richards: Postdoctoral fellow: Stephanie Ross;
 PhD students: John Morris (Human Genetics), Despoina Manousaki (Human Genetics) and Agustin Cerani (Epidemiology);
 MSc students: Lauren Mokry (Epidemiology);
 Clinical Fellows: Omar Ahmad (Internal Medicine) and Tricia Peters (Endocrinology)
 Undergraduate: Julyan Baruch

Tamilia: 2 Endocrine Residents – Endocrine Tumour Research

Trifiro: 2 MSc students;
 1 PhD student

Medical Students

- (i) Metabolic Bone Disease in Unit 5, Med I; preparation of lecture notes, case study, and quiz for students and organizing small group tutors.
- (ii) One 1-hour lecture on metabolic bone disorders and two 1.5-hour small group sessions

Residents

- (i) Core lectures in Endocrinology
- (ii) Simulated oral examination in Internal Medicine

Postgraduate Students

Advances in Human Genetics: A post graduate course offered by the Department of Human Genetics: Three 1.5-hr lectures on the genetics of metabolic bone diseases.

Endocrine Residents (Fellows) and Medical Residents doing elective rotations participate in all our clinical activities. They are under the direct supervision of the Attending on service. Residents must attend clinics while not busy with the in-patient service and patients in Emergency. Some clinics are compulsory: Gestational Diabetes, Thyroid, Lipid and Diabetes Clinic. Our Division has become very popular for elective rotations among residents and students. All trainees rotating through the Division must attend Endocrine Grand Rounds (every Thursday from 11:30-12:30). This past year we have had an unusually high number of Endocrine Residents, and the same is expected for the next academic year. In addition to McGill Medical Students doing elective rotations, we have received students from Australia and Saudi Arabia during the last year. Notably, the majority of McGill candidates to McGill Endocrine Residents have come from our Internal Medicine training program over the last several years, a reflection of the positive influence of our staff on the Residents. The McGill Endocrine Teaching Program at large was highly rated by the trainees with our Division receiving the highest ratings in a large number of items, notably conferences, bedside and outpatient teaching, integration with basic sciences. Our weakest mark is on premises and facilities for Endocrine Residents.

In addition to these tutorial activities, our Division offers a yearly cycle of lectures on essential endocrinology for residents and non-endocrinologists in general. Our Division also actively participates in the undergraduate teaching of Endocrine Physiology and Calcium Homeostasis (Med-I Physiology) with members being small group tutors this year (Assimakopoulos, Kader, Karaplis, Majdan, Schiffrin, and Trifiro). All GFTs' have also been very active on CME accredited activities. Dr. Tina Kader has been traditionally active in CME to various groups of physicians, paramedical personnel, as well as in giving talks to the community at large on the prevention of obesity and diabetes. Ms. Joyce Arsenault (Nurse, Certified Diabetes Educator), Ms. Laura Bergmame (Nurse, Certified, Diabetes Educator) and Ms. Sondra Sherman (Dietitian, Certified Diabetes Educator) have worked together with Dr. Tina Kader in this latter endeavour.

Endocrine Grand Rounds, under the direction of Dr. Mark Trifiro, have continued to be a great success because of the timeliness of the subjects, the sensible balance of basic and clinical science and the quality of the invited speakers. Endocrine Grand Rounds are given weekly on Thursdays from September to June.

3. Involvement in the community:

Both Laura Bergmame (Nurse) and Sondra Sherman (Dietitian) participated in the JDRF (Juvenile Diabetes Research Foundation) TELUS Walk to Cure Diabetes in 2016.

Sondra Sherman is very active in the Canadian Diabetes Association and participates in radio and television interviews.

4. Partnerships:

Dr. Trifiro and Dr. Tamilia are collaborating in redeveloping new and novel therapeutics in the treatment of thyroid cancer both early stage and late stage disease. This research uses nanotechnology therapeutics developed in Dr. Trifiro's laboratory; specifically it incorporates multiwall carbon nanotubes decorated with anti TSH receptor antibodies or recombinant TSH to direct the nanotubes to a thyroid cell surface. Once targeted simple near infra-red exposure triggers

significant heat generation between the nanoparticles to destroy cells. This work is ongoing.

The JGH Division of Endocrinology participates in the quarterly combined Endocrine Rounds held by the McGill Endocrine Division.

5. Milestones: None reported

6. New hires, promotions, and retirements: There has been no changes in staffing in the past year.

7. Honours, awards, and prizes:

J. Brent Richards was the recipient of the Prix du Jeune Chercheur André-Dupont 2016 from the Club de Recherches Cliniques du Québec.

J. Brent Richards was the winner of the 2016 JGH Award for Excellence in Clinical Research. His primary objectives are to identify the genetic determinants of common, aging-related endocrine diseases, such as osteoporosis, and to use this information to improve clinical care.

J. Brent Richards was elected to the Royal Society of Canada College of New Scholars, Artists and Scientists. Dr. Richards studies the genetic determinants of common, aging-related endocrine diseases, and the ways in which these findings can be applied to improving clinical care.

Sondra Sherman, Dietitian received the Canadian Diabetes Association 2016 Diabetes Educator of the Year Award.

8. Fundraising: None Reported

SECTION I - DIVISION STATUS UPDATE

1. Mission and objectives of the Division

The division continues to place a high priority on patient care and in doing so seeks new clinical recruits either as full-time or as part time members.

Other priorities include the expansion of both clinical research and basic research personnel. This will be a very arduous task given the many roadblocks at the university, government and hospital level; however the Division remains confident that when the right recruits come along, it will find the mechanisms to have them join its staff.

2. A nominative list of academic staff, their academic rank

Dr. Mark A. Trifiro - Chief, Professor (GFT-U)

Dr. Peter Assimakopoulos - Associate Professor (GFT-H)

Dr. Stavroula Christopoulos - Assistant Professor (GFT-H)

Dr. Tina Kader – Associate Professor (GFT-H)

Dr. Andrew Karaplis - Professor (GFT-U)

Dr. Agnieszka Majdan - Assistant Professor (GFT-H)
Dr. John Brent Richards - Assistant Professor (GFT-U)
Dr. Alicia Schiffrin - Professor (GFT-U)
Dr. Morris Schweitzer - Associate Professor (GFT-H)
Dr. Michael Tamilia - Associate Professor (GFT-H)
Dr. Oriana Yu – Assistant Professor (GFT-H)
Dr. Lilian Jukier - Adjunct Professor (P/T)
Dr. Arturo Rizzo - Assistant Professor (P/T)

SECTION II - GRANTS, PUBLICATIONS, AND SERVICE OUTSIDE OF MCGILL

1. Grants and awards received

Morris Schweitzer

- 1) Characterization of the PCSK9 gene and structure/function analysis of the PCSK9 protein in a family with very low LDL-cholesterol
Pfizer
- 2) Impact of PCSK9 neutralizing antibodies on hepatic steatosis in a mouse model
Department of medicine

Oriana Yu

- 1) 2016/3 - 2018/3 **Canadian Institutes of Health Research (CIHR)**
Co-applicant Incretin-based Drugs and the Risk of Adverse Renal Outcomes; Total Funding - 215,000 (Canadian dollar)

Mark Trifiro

- 1) 2016/7 – 2018/6: **Canada Genome Grant** - Phase 1
PI: Mark Trifiro

Brent Richards

- 1) 2016-2017 **National Institute of Health (NIH)**. Molecular Genetic Studies of von Willebrand Factor. PI: David Ginsburg. **Role: co-investigator**. \$1,540, 203 USD. Amount received: \$15,552 USD.
- 2) 2016-2023 **Canadian Institutes of Health Research (CIHR) Foundation Grant**. Declined. “Awarded for sustainable funding for health research leaders for innovative, high-impact research programs.” Ranked in the top 2.5th percentile of 911 submissions. **PI: Brent Richards**. Collaborators: George Davey Smith, Douglas Kiel, Mark Lathrop, Matt Maurano, Fernando Rivadeneira, Philippe Sanseau, Stephen Sawcer, Nicole Soranzo, Nicolas Timpon, Cheryl Ackert-Bicknell. \$1.89M over 7 years.

- 3) 2016-2019 **Canadian Institutes of Health Research (CIHR) Program Grant.** Causal Proteins for Osteoporosis. **PI: Brent Richards.** Collaborators: David Goltzman, Elin Grundberg, Cheryl Ackert-Bicknell, Celia Greenwood. \$1.12M over 3 years.
- 4) 2016-2018 **Merck, Sharpe & Dohme/McGill Faculty of Medicine Grants for Translational Research.** Role: Glucose-Independent Mechanism for Coronary Heart Disease in Type 2 Diabetes: An Epigenetic Study. **PI: Brent Richards.** Collaborator: Elin Grunberg, Mark Eisenberg. \$200,000 over 2 years.
- 5) 2016-2018 **Multiple Sclerosis Society of Canada + National Multiple Sclerosis Society (co-funded).** The association between BMI and EBV with the risk of MS: A Mendelian randomization analysis. **PI: Brent Richards.** Collaborators: George Davey Smith, Stephen Sawcer, Approx. \$168,488.93 over two years.
- 6) 2015-2017 **Eli Lilly, Lilly Research Award Program.** Somatic Mutations: A Disruptive Paradigm for Identifying Driver Mutations in Autoimmunity. **PI: Brent Richards.** Peer-reviewed, investigator-led grant. 393,805 over 2 years.

2. Scholarly works published in the 2016 calendar year:

J. Brent Richards

- 1) Chou WC, Zheng HF, Cheng CH, Yan H, Wang L, Han F, **Richards JB**, Karasik D, Kiel DP, Hsu YH. (2016). A combined reference panel from the 1000 Genomes and UK10K projects improved rare variant imputation in European and Chinese samples. **Sci Rep [IF: 5.2]**. 6:39313.
- 2) J Devorak, LE Mokry, JA Morris, V Forgetta, G Davey Smith, S Sawcer, **JB Richards**. Large Differences in Adiponectin Levels Have No Clear Effect on Multiple Sclerosis Risk: A Mendelian Randomization Study. **Multiple Sclerosis Journal [IF: 4.8]**. Epub ahead of print November 30, 2016. doi:10.1177/1352458516681196
- 3) LE Mokry, S Ross, JA Morris, D Manousaki, V Forgetta, **B Richards**. (2016). Genetically decreased vitamin D and risk of Alzheimer's disease. **Neurology [IF: 8.3]**. 87(24):2567-2574.
- 4) McCarthy S, Das S, Kretzschmar W, Delaneau O, Wood AR, Teumer A, Kang HM, Fuchsberger C, Danecek P, Sharp K, Luo Y, Sidore C, Kwong A, Timpson N, Koskinen S, Vrieze S, Scott LJ, Zhang H, Mahajan A, Veldink J, Peters U, Pato C, van Duijn CM, Gillies CE, Gandin I, Mezzavilla M, Gilly A, Cocca M, Traglia M, Angius A, Barrett JC, Boomsma D, Branham K, Breen G, Brummett CM, Busonero F, Campbell H, Chan A, Chen S, Chew E, Collins FS, Corbin LJ, Smith GD, Dedoussis G, Dorr M, Farmaki AE, Ferrucci L, Forer L, Fraser RM, Gabriel S, Levy S, Groop L, Harrison T, Hattersley A, Holmen OL,

- Hveem K, Kretzler M, Lee JC, McGue M, Meitinger T, Melzer D, Min JL, Mohlke KL, Vincent JB, Nauck M, Nickerson D, Palotie A, Pato M, Pirastu N, McInnis M, **Richards JB**, Sala C, Salomaa V, Schlessinger D, Schoenherr S, Slagboom PE, Small K, Spector T, Stambolian D, Tuke M, Tuomilehto J, Van den Berg LH, Van Rheenen W, Volker U, Wijmenga C, Toniolo D, Zeggini E, Gasparini P, Sampson MG, Wilson JF, Frayling T, de Bakker PI, Swertz MA, McCarroll S, Kooperberg C, Dekker A, Altshuler D, Willer C, Iacono W, Ripatti S, Soranzo N, Walter K, Swaroop A, Cucca F, Anderson CA, Myers RM, Boehnke M, McCarthy MI, Durbin R; Haplotype Reference Consortium. (2016). A reference panel of 64,976 haplotypes for genotype imputation. **Nat Genet [IF: 31.6]**. 48(10):1279-83.
- 5) D Manousaki, JW Kent Jr., K Haack S Zhou, P Xie, CM Greenwood, P Brassard, DE Newman, S Cole, JG Umans, G Rouleau, AG Comuzzie, **JB Richards**. (2016). Towards Precision Medicine: TBC1D4 Disruption is Common in The Inuit and Leads to Under-Diagnosis of Type 2 Diabetes. **Diabetes Care [IF: 8.4]**. 39(11):1889-1895. This paper was highlighted in Diabetes Care with an Editorial and a special issue focusing on personalized medicine in diabetes.
 - 6) Manousaki D, Mokry LE, Ross S, Goltzman D, **Richards JB**. (2016). Mendelian Randomization Studies do not Support a Role for Vitamin D in Coronary Artery Disease. **Circulation: Cardiovascular Genetics [IF: 6.1]**. 9(4):349-56.
 - 7) Taylor AE, Burgess S, Ware JJ, Gage SH, **Richards JB**, Davey Smith G, Munafò MR. (2016). Investigating causality in the association between 25(OH)D and schizophrenia. **Scientific Reports [IF 5.2]**. 6:26496.
 - 8) LE Mokry, S Ross, NJ Timpson, S Sawcer, G Davey Smith, **JB Richards**. (2016). Obesity and Multiple Sclerosis: A Mendelian Randomization Study. **PLOS Medicine [IF: 14.4]** 13(6): e1002053. doi:10.1371/ journal.pmed.1002053 2016. **This paper received an Editorial from PLOS Medicine.**
 - 9) Forgetta V, **Richards JB**. (2016). Software Application Profiles: useful and novel software for epidemiological data analysis. **Int J Epidemiol [IF:9.2]**. 45(2):309-10.
 - 10) Bull CJ, Bonilla C, Holly JM, Perks CM, Davies N, Haycock P, Yu OH, **Richards JB**, Eeles R, Easton D, Kote-Jarai Z, Amin Al Olama A, Benlloch S, Muir K, Giles GG, MacInnis RJ, Wiklund F, Gronberg H, Haiman CA, Schleutker J, Nordestgaard BG, Travis RC, Neal D, Pashayan N, Khaw KT, Stanford JL, Blot WJ, Thibodeau S, Maier C, Kibel AS, Cybulski C, Cannon-Albright L, Brenner H, Park J, Kaneva R, Batra J, Teixeira MR, Micheal A, Pandha H, Smith GD, Lewis SJ, Martin RM; PRACTICAL consortium. (2016). Blood lipids and prostate cancer: a Mendelian randomization analysis. **Cancer Med [IF: 2.5]**. 5(6):1125-36.
 - 11) Mullin BH, Walsh JP, Zheng HF, Brown SJ, Surdulescu GL, Curtis C, Breen G, Dudbridge F, **Richards JB**, Spector TD, Wilson SG. (2016). Genome-wide association study using family-based cohorts identifies the WLS and CCDC170/ESR1 loci as associated with bone mineral density. **BMC Genomics [IF: 4.0]**. 17(1):136. doi: 10.1186/s12864-016-2481-0.

- 12) Lu Y, Day FR, Gustafsson S, Buchkovich ML, Na J, Bataille V, Cousminer DL, **Dastani Z**, Drong AW, Esko T, Evans DM, Falchi M, Feitosa MF, Ferreira T, Hedman ÅK, Haring R, Hysi PG, Iles MM, Justice AE, Kanoni S, Lagou V, Li R, Li X, Locke A, Lu C, Mägi R, Perry JR, Pers TH, Qi Q, Sanna M, Schmidt EM, Scott WR, Shungin D, Teumer A, Vinkhuyzen AA, Walker RW, Westra HJ, Zhang M, Zhang W, Zhao JH, Zhu Z, Afzal U, Ahluwalia TS, Bakker SJ, Bellis C, Bonnefond A, Borodulin K, Buchman AS, Cederholm T, Choh AC, Choi HJ, Curran JE, de Groot LC, De Jager PL, Dhonukshe-Rutten RA, Enneman AW, Eury E, Evans DS, Forsen T, Friedrich N, Fumeron F, Garcia ME, Gärtner S, Han BG, Havulinna AS, Hayward C, Hernandez D, Hillege H, Ittermann T, Kent JW, Kolcic I, Laatikainen T, Lahti J, Mateo Leach I, Lee CG, Lee JY, Liu T, Liu Y, Lobbens S, Loh M, Lyytikäinen LP, Medina-Gomez C, Michaëlsson K, Nalls MA, Nielson CM, Oozageer L, Pascoe L, Paternoster L, Polašek O, Ripatti S, Sarzynski MA, Shin CS, Narančić NS, Spira D, Srikanth P, Steinhagen-Thiessen E, Sung YJ, Swart KM, Taittonen L, Tanaka T, Tikkanen E, van der Velde N, van Schoor NM, Verweij N, Wright AF, Yu L, Zmuda JM, Eklund N, Forrester T, Grarup N, Jackson AU, Kristiansson K, Kuulasmaa T, Kuusisto J, Lichtner P, Luan J, Mahajan A, Männistö S, Palmer CD, Ried JS, Scott RA, Stancáková A, Wagner PJ, Demirkan A, Döring A, Gudnason V, Kiel DP, Kühnel B, Mangino M, Mcknight B, Menni C, O'Connell JR, Oostra BA, Shuldiner AR, Song K, Vandenput L, van Duijn CM, Vollenweider P, White CC, Boehnke M, Boettcher Y, Cooper RS, Forouhi NG, Gieger C, Grallert H, Hingorani A, Jørgensen T, Jousilahti P, Kivimäki M, Kumari M, Laakso M, Langenberg C, Linneberg A, Luke A, Mckenzie CA, Palotie A, Pedersen O, Peters A, Strauch K, Tayo BO, Wareham NJ, Bennett DA, Bertram L, Blangero J, Blüher M, Bouchard C, Campbell H, Cho NH, Cummings SR, Czerwinski SA, Demuth I, Eckardt R, Eriksson JG, Ferrucci L, Franco OH, Froguel P, Gansevoort RT, Hansen T, Harris TB, Hastie N, Heliövaara M, Hofman A, Jordan JM, Jula A, Kähönen M, Kajantie E, Knekt PB, Koskinen S, Kovacs P, Lehtimäki T, Lind L, Liu Y, Orwoll ES, Osmond C, Perola M, Pérusse L, Raitakari OT, Rankinen T, Rao DC, Rice TK, Rivadeneira F, Rudan I, Salomaa V, Sørensen TI, Stumvoll M, Tönjes A, Towne B, Tranah GJ, Tremblay A, Uitterlinden AG, van der Harst P, Vartiainen E, Viikari JS, Vitart V, Vohl MC, Völzke H, Walker M, Wallaschofski H, Wild S, Wilson JF, Yengo L, Bishop DT, Borecki IB, Chambers JC, Cupples LA, Dehghan A, Deloukas P, Fatemifar G, Fox C, Furey TS, Franke L, Han J, Hunter DJ, Karjalainen J, Karpe F, Kaplan RC, Kooner JS, McCarthy MI, Murabito JM, Morris AP, Bishop JA, North KE, Ohlsson C, Ong KK, Prokopenko I, **Richards JB**, Schadt EE, Spector TD, Widén E, Willer CJ, Yang J, Ingelsson E, Mohlke KL, Hirschhorn JN, Pospisilik JA, Zillikens MC, Lindgren C, Kilpeläinen TO, Loos RJ. (2016). New loci for body fat percentage reveal link between adiposity and cardiometabolic disease risk. **Nature Communications [IF: 11.5]**. 7:10495. doi: 10.1038/ncomms10495.
- 13) Lakhal-Chaieb L, Oualkacha K, **Richards BJ**, Greenwood CM. (2016). A rare variant association test in family-based designs and non-normal quantitative traits. **Statistics in Medicine [IF: 1.8]**, 35(6):905-21. doi: 10.1002/sim.6750

Andrew Karaplis

- 1) Camirand A, Goltzman D, Gupta A, Kaouass M, Panda D, **Karaplis A**. The role of parathyroid hormone-related protein (PTHrP) in osteoblast response to microgravity:

mechanistic implications for osteoporosis development. *PLoS One*. 2016 Jul 27;11(7):e0160034. doi: 10.1371/journal.pone.0160034.

- 2) Zhou X, Dai X, Wu X, Ji J, **Karaplis A**, Goltzman D, Yang X, Miao D. Overexpression of Bmi1 in lymphocytes stimulates skeletogenesis by improving the osteogenic microenvironment. *Sci Rep*. 2016 Jul 4;6:29171. doi: 10.1038/srep29171.
- 3) Sun W, Wu J, Huang L, Liu H, Wang R, **Karaplis A**, Goltzman D, Miao D. PTHrP nuclear localization and carboxyl terminus sequences modulate dental and mandibular development in part via the action of p27. *Endocrinology*. 2016 Apr;157(4):1372-84. doi: 10.1210/en.2015-1555.
- 4) Bai X, Miao D, Xiao S, Qiu D, St-Arnaud R, Petkovich M, Gupta A, Goltzman D, **Karaplis AC**. CYP24 inhibition as a therapeutic target in FGF23-mediated renal phosphate wasting disorders. *J Clin Invest*. 2016 Feb;126(2):667-80. doi: 10.1172/JCI81928.

Morris Schweitzer

- 1) **Schweitzer M**, Makhoul S, Paliouras M, Beitel LK, Gottlieb B, Trifiro M, Chowdhury SF, Zaman NM, Wang E, Davis H, Chalifour LE. Characterization of the NPC1L1 gene and proteome from an exceptional responder to ezetimibe. *Atherosclerosis*. 2016 Mar;246:78-86. doi: 10.1016/j.atherosclerosis.2015.12.032. Epub 2015 Dec 24.

Michael Tamilia

- 1) Jooya A, Saliba J, Blackburn A, **Tamilia M**, Hier MP, Mlynarek A, Forest VI, Rochon L, Florea A, Wang H, Payne RJ. The role of repeat fine needle aspiration in the management of indeterminate thyroid nodules. *J Otolaryngol Head Neck Surg*. 2016 Oct 18;45(1):51
- 2) Dotan I, Roche PJ, **Tamilia M**, Paliouras M, Mitmaker EJ, Trifiro MA. Correction: Engineering Multi-Walled Carbon Nanotube Therapeutic Bionanofluids to Selectively Target Papillary Thyroid Cancer Cells. *PLoS One*. 2016 Jun 16;11(6):e0158022. doi: 10.1371/journal.pone.0158022. eCollection 2016
- 3) Mujammami M, Hier MP, Payne RJ, Rochon L, **Tamilia M**. Long-Term Outcomes of Patients with Papillary Thyroid Cancer Undergoing Remnant Ablation with 30 milliCuries Radioiodine. *Thyroid*. 2016 Jul;26(7):951-8. doi: 10.1089/thy.2016.0036. Epub 2016 Jun 1.
- 4) Khalife S, Bouhabel S, Forest VI, Hier MP, Rochon L, **Tamilia M**, Payne RJ. The McGill Thyroid Nodule Score's (MTNS+) role in the investigation of thyroid nodules with benign ultrasound guided fine needle aspiration biopsies: a retrospective review. *J Otolaryngol Head Neck Surg*. 2016 May 4;45(1):29. doi: 10.1186/s40463-016-0141-7.
- 5) Mascarella MA, Forest VI, Nhan C, Leboeuf R, **Tamilia M**, Mlynarek AM, Payne RJ. Seasonal Difference in Postthyroidectomy Hypocalcemia: A Montreal-Based Study. *Otolaryngol Head Neck Surg*. 2016 Feb;154(2):263-7. doi: 10.1177/0194599815617126. Epub 2015 Nov 13.

Mark Trifiro

- 1) Dotan I, Roche PJ, Tamilia M, Paliouras M, Mitmaker EJ, **Trifiro MA**. Correction: Engineering Multi-Walled Carbon Nanotube Therapeutic Bionanofluids to Selectively Target Papillary Thyroid Cancer Cells. **PLoS One**. 2016 Jun 16;11(6):e0158022. doi: 10.1371/journal.pone.0158022. eCollection 2016
- 2) Dotan I, Roche PJ, Paliouras M, Mitmaker EJ, **Trifiro MA**. Engineering Multi-Walled Carbon Nanotube Therapeutic Bionanofluids to Selectively Target Papillary Thyroid Cancer Cells. **PLoS One**. 2016 Feb 22;11(2):e0149723. doi: 10.1371/journal.pone.0149723. eCollection 2016. Erratum in: **PLoS One**. 2016;11(6):e0158022.
- 3) Schweitzer M, Makhoul S, Paliouras M, Beitel LK, Gottlieb B, **Trifiro M**, Chowdhury SF, Zaman NM, Wang E, Davis H, Chalifour LE. Characterization of the NPC1L1 gene and proteome from an exceptional responder to ezetimibe. **Atherosclerosis**. 2016 Mar;246:78-86. doi: 10.1016/j.atherosclerosis.2015.12.032. Epub 2015 Dec 24.
- 4) Gao S, Tibiche C, Zou J, Zaman N, **Trifiro M**, O'Connor-McCourt M, Wang E. Identification and Construction of Combinatory Cancer Hallmark-Based Gene Signature Sets to Predict Recurrence and Chemotherapy Benefit in Stage II Colorectal Cancer. **JAMA Oncol**. 2016 Jan;2(1):37-45. doi: 10.1001/jamaoncol.2015.3413.

Oriana Yu

- 1) **Yu OH**, Suissa, S. Identifying Causes for Excess Mortality in Patients with Diabetes: Closer but not there yet. **Diabetes Care**. 2016 Nov;39(11):1851-1853.
- 2) Hicks BM, Yin H, **Yu OH**, Pollak MN, Platt RW, Azoulay L. Glucagon-like peptide-1 analogues and risk of breast cancer in women with type 2 diabetes: population based cohort study using the UK clinical practice research datalink. **BMJ**. 2016 20; 355:i5340.
- 3) Faillie JL, **Yu OH**, Yin H, Hillaire-Buys D, Barkun A, Azoulay L. Association of bile duct and gallbladder diseases with the use of incretin-based drugs in patients with type 2 diabetes mellitus. **JAMA Intern Med**. 2016 Oct 1;176(10):1474-1481
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7) Academic and community engagement service outside of McGill by individual members of the unit

Members of the Division continue to serve in committees of granting agencies, editorial boards and to participate in other high level academic activities at national and international levels. Members have succeeded in the competing renewal of their grants as well as in obtaining additional support from peer-reviewed granting agencies.

Oriana Yu

Internal Reviewer for Grant Applications:

1. Internal Reviewer: Dr. Mark Eisenberg CIHR Project Scheme Grant Application (February 2016)
3. Chair Internal Reviewer: Dr. Mark Trifiro CIHR Project Scheme Grant Application (February 2016)
4. Internal Reviewer: Dr. Marie Hudson CIHR Project Scheme Grant Application (September 2016)

J. Brent Richards

Panel Member of Grant/Scholarship Reviews

2016 CIHR New Investigator Awards
FRSQ Chercheurs Boursiers
National Health and Medical Research Council, Australia
Network of Applied Genetic Medicine of Québec (RMGA). Fellowship Applications.
Internal Review of Grants for the University of Queensland Diamantina -Institute, Australia
LDI Internal Reviews: Celia Greenwood, Mark Eisenberg, Mark Wainberg, Marc Fabian, Kris Fillion, George Thanassoulis, Ian Shrier, Oriana Yu, Claudia Kleinman, David Goltzman

Editorial Board Membership

2016 Journal of Bone and Mineral Research
International Journal of Epidemiology (Associate Editor)
Journal of Medical Genetics
Nature Genomic Medicine

Submitted by:

Mark Trifiro, M. D.
Chief, Division of Endocrinology