

Annual Report
Division of Clinical Epidemiology
Department of Medicine - Jewish General Hospital
January 1 - December 31, 2013

SUMMARY

1. Research and publications:

Total of new funding awarded this year: \$664,252. 29 publications were published in 2013

Dr. Samy Suissa is the Principal Investigator of the Canadian Network on Observational Drug Effect Studies (CNODES), and oversees funding of \$17.5 million received from CIHR for this network. CNODES assembles the top pharmaco-epidemiologists in the country and uses a collaborative, population-based approach, exploiting existing healthcare databases across the country and using sophisticated, cutting edge and powerful analytical methods to rapidly evaluate the risks and benefits of medications on the health of Canadians.

Dr Suissa was awarded his renewal for the James McGill Professor Award for another 7 years. He is also a co-investigator on 2 CIHR grants entitled:

- 1) The use of beta-blockers and the prevention of cancer-specific mortality
- 2) Are cesarean deliveries associated with long-term increased risk of small bowel obstruction?

Dr. Filion was awarded one CIHR operating grant (2 years) as principal investigator entitled “Gestational diabetes mellitus and the risk of incident cardiovascular disease”. He is also a co-investigator on three grants awarded by CIHR:

- 1) The efficacy and safety of smoking cessation interventions in patients with cardiovascular disease: a meta-analysis of randomized controlled trials. (Knowledge Synthesis)
- 2) A systematic review and meta-analysis of combination therapies for smoking cessation. (Knowledge Synthesis)
- 3) Anti-épileptiques et risque d'évènements vasculaires : étude de cohorte en population générale. [Anti-epileptic drugs and the risk of adverse vascular events: a population-based cohort study] (Operating Grant)

Dr. Filion was also a co-investigator on a Heart and Stroke Foundation of Canada Grant-in-Aid entitled “A systematic review and meta-analysis of combination therapies for smoking cessation”, which was declined.

2. Teaching and learning (undergraduate and graduate):

Dr. Samy Suissa teaches Advanced Epidemiology in the Department of Epidemiology and Biostatistics. He also leads the Pharmacoepidemiology Summer Program which holds 4 courses each summer and in which he himself teaches the Advanced Pharmacoepidemiology course. He is currently supervising 3 PhD students, 3 MSc students and 2 Post doctoral fellows.

Dr. Kristian Filion teaches in the medical school and in the Department of Epidemiology and

Biostatistics. In the medical school, He taught the Epidemiology Small Groups as Unit 8 to second year medical students (11 hours), Epidemiology Small Groups to first year medical students as part of the new curriculum (18 hours), and gave a Block C lecture to the first year medical students entitled “Systematic Reviews and Meta-Analyses” (1 hour). In the Department of Epidemiology and Biostatistics, Dr. Filion was a Co-Instructor in the course entitled “Systematic Reviews and Meta-Analyses” and a Guest Lecturer in:

- 1) Knowledge Synthesis - EPIB-677 (2 hours)
- 2) Clinical Epidemiology - EPIB-600B (3 hours)

3. Involvement in the community:

Dr. Suissa

- Member, External Advisory Board, PROTECT-European Medicines Agency, 2012-
- Member, Drug Safety and Effectiveness Network (DSEN) Interim Science Advisory Committee (ISAC), Canadian Institutes for Health Research, 2011-
- Associate Editor, Methodological Advisor, European Respiratory Journal, 2007-
- Section Head, Statistical methodologies & health informatics, Faculty of 1000 Medicine, 2005-
- Associate Editor, Pharmacoepidemiology and Drug Safety, 2003-

Dr. Filion:

- Member, Membership and Communications Committee, American Heart Association Council of Cardiovascular Disease Epidemiology and Prevention, 2011-
- Member, Program Advisory Committee, Institute for Circulatory and Respiratory Health Young Investigators Forum, Canadian Institutes of Health Research, 2011

4. Partnerships:

- Summer Course on Pharmacoepidemiology and Drug Safety. Utrecht, Netherlands.
- Research and training collaboration, Clalit Health, Israel

5. Milestones:

There has been no change in staffing.

6. Honours, awards, and prizes:

Dr. Suissa

1. Fellow – Distinction, Canadian Academy of Health Science 2013-

7. Fundraising:

The CNODES grant allows Dr Suissa to transfer 100,000 per year to the Faculty of Medicine to free up his time, which permitted the McGill Department of Epidemiology and Biostatistics to recruit a biostatistician, Dr Olli Saarela, for the next four years.

SECTION I - DIVISION STATUS UPDATE

1. Mission and objectives of the Division

The Division of Clinical Epidemiology is still a recent addition to the JGH Department of Medicine and now includes three members, Dr Kristian Filion and Dr Samy Suissa, the Chief of the Division.

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

Dr. Kristian Filion – Assistant Professor - active

Dr. Samy Suissa – Professor - active

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

1. Grants and awards received

Filion, Kristian – New grants

- 1) 2013-2014: **Co-Investigator**, Canadian Institutes of Health Research. The efficacy and safety of smoking cessation interventions in patients with cardiovascular disease: a meta-analysis of randomized controlled trials. (Knowledge Synthesis) - \$99,959
- 2) 2013-2014: **Co-Investigator**, Heart and Stroke Foundation of Canada. A systematic review and meta-analysis of combination therapies for smoking cessation. (Grant-in-Aid) - \$24,272 (Declined)
- 3) 2013-2015: **Principal Investigator**, Canadian Institutes of Health Research. Gestational diabetes mellitus and the risk of incident cardiovascular disease. (Operating Grant) - \$149,744
- 4) 2013-2014: **Co-Investigator**, Canadian Institutes of Health Research. A systematic review and meta-analysis of combination therapies for smoking cessation. (Knowledge Synthesis) - \$97,988
- 5) 2013-2014: **Co-Investigator**, Canadian Institutes of Health Research. Anti-épileptiques et risque d'évènements vasculaires : étude de cohorte en population générale. [Anti-epileptic drugs and the risk of adverse vascular events: a population-based cohort study] (Operating Grant) - \$100,000

Filion, Kristian – Currently held grants

- 1) 2012-2015 : **Principal Investigator**, Fonds de la Recherche du Québec – Santé. *Une évaluation populationnelle des effets cardiovasculaires indésirables des médicaments (Établissement de jeunes chercheurs - Juniors I)*. [A population-based evaluation of the cardiovascular safety of medications. (Young Investigator Establishment Award)] - \$45,000
- 2) 2012-2014: **Principal Investigator**, Canadian Institutes of Health Research. Drospirenone-containing combined oral contraceptives and the risk of arterial thrombosis. (Operating Grant) - \$154,530
- 3) 2012-2014: **Principal Investigator**, Canadian Institutes of Health Research. The cardiovascular safety of varenicline: a population-based cohort study. (Operating Grant) - \$144,720
- 4) 2012-2014: **Co-Investigator**, LDI Clinical Research Pilot Project (CliPP) Funding Initiative. Administration of fixed-dose versus weight-based dose of heparin in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention. - \$24,880

- 5) 2012-2013: **Co-Investigator**, Canadian Institutes of Health Research. A systematic review and meta-analysis of the safety of combined oral contraceptives. (Operating Grant) - \$47,250

Suissa, Samy – New grants

- 1) 2013-15: **Co-investigator**, The use of beta-blockers and the prevention of cancer-specific mortality, *Canadian Institutes for Health Research (125,476)*
- 2) 2013-15: **Co-investigator**, Are cesarean deliveries associated with long-term increased risk of small bowel obstruction? *Canadian Institutes for Health Research (156,813)*

Suissa, Samy - Currently held Grants

- 3) 2012-2019 **Principal Investigator**, James McGill Professor Award, McGill University (\$105,000)
- 4) 2012-2014 **Co-investigator**, The use highly prolactin-elevating antipsychotics and the risk of ovarian and endometrial cancer. Canadian Institutes for Health Research (117,400)
- 5) 2012-2015 **Co-investigator**, Propensity scores and marginal structural models in drug safety research Canadian Institutes for Health Research (405,940)
- 6) 2011-15 : **Principal Investigator**, Canadian Network for Observational Drug Effect Studies (CNODES) Canadian Institutes for Health Research (17,500,000)
- 7) 2010-14 : **Principal Investigator**, Multiple medication use in the Quebec elderly and the risk of motor vehicle crash. Canadian Institutes for Health Research (271,489)

2. Scholarly works published in the 2013 calendar year:

Filion, Kristian

- 1) Garfinkle M, Lawler PR, Filion KB, Eisenberg MJ. Red blood cell transfusion and mortality among patients with acute coronary syndromes: a systematic review. *Int J Cardiol.* 2013; 164:151-7.
- 2) Lawler PR, Filion KB, Dourian T, Atallah R, Garfinkle M, Eisenberg MJ. Anemia and mortality in acute coronary syndromes: a systematic review and meta-analysis. *Am Heart J* 2013; 165:143-53.
- 3) Filion KB, Luepker RV. Cigarette smoking and cardiovascular disease: Lessons from Framingham. *Global Heart* 2013; 8:35-41.
- 4) Wu CQ, Grandi SM, Filion KB, Joseph L, Abenhaim HA, Eisenberg MJ. Drospirenone-containing oral contraceptive pills and the risk of venous and arterial thrombosis: a systematic review. *BJOG* 2013; 120:801-11.
- 5) Wasserlauf G, Grandi SM, Filion KB, Eisenberg MJ. Meta-analysis of rivaroxaban and bleeding risk. *Am J Cardiol* 2013; 112:454-60.
- 6) Huang K, Grandi SM, Filion KB, Eisenberg MJ. Late and very late stent thrombosis in patients with second generation drug-eluting stents. *Can J Cardiol* 2013; 29:1488-94.
- 7) Davis MI, Filion KB, Zhang D, Eisenberg MJ, Afilalo J, Schiffrin EL, Joyal D. Effectiveness of renal denervation therapy for resistant hypertension: a systematic review and meta-analysis. *J Am Coll Cardiol* 2013; 62:231-41.
- 8) Filion KB, Chateau D, Targownik LE, Gershon A, Durand M, Tamim H, Teare GF, Ravani P, Ernst P, Dormuth CR, and the CNODES Investigators. Proton pump inhibitors and the risk of hospitalization for community-acquired pneumonia: replicated cohort studies with meta-analysis. *Gut* Published Online First: 16th July 2013. doi: 10.1136/gutjnl-2013-304738. [Epub ahead of print]

Suissa, Samy

- 1) Smiechowski BB, Azoulay L, Yin H, Pollak MN, Suissa S. The use of metformin and the incidence of lung cancer in patients with type 2 diabetes. *Diabetes Care* 2013;36(1):124-129.
- 2) Lapi F, Azoulay L, Yin H, Nessim SJ, Suissa S. Concurrent use of diuretics, angiotensin converting enzyme inhibitors, and angiotensin receptor blockers with non-steroidal anti-inflammatory drug and risk of acute kidney injury: nested case-control study. *British Medical journal* 2013;346:e8525.
- 3) Assayag J, Yin H, Benayoun S, Pollak MN, Suissa S, Azoulay L. Androgen deprivation therapy and the risk of colorectal cancer in patients with prostate cancer. *Cancer Causes Control* 2013;24(5):839-845.
- 4) Saad N, Camus P, Suissa S, Ernst P. Statins and the risk of interstitial lung disease: a cohort study. *Thorax*, January 2013;68(4):361-364.
- 5) Suissa S, Ariel A. FDA-mandated trials of LABA safety in asthma: will we know the answer? *Chest* 2013;143(5):1208-1213.
- 6) Azoulay L, Dell'Aniello S, Simon T, Renoux C, Suissa S. The concurrent use of antithrombotic therapies and the risk of bleeding in patients with atrial fibrillation. *Thromb Haemost* 2013;109(3):431-439.
- 7) Suissa S. Number needed to treat in COPD: exacerbations versus pneumonia. *Thorax* 2013;68(6):540-543.
- 8) Lapi F, Kezouh A, Suissa S, Ernst P. The use of inhaled corticosteroids and the risk of adrenal insufficiency. *Eur Respir J* 2013;42(1):79-86.
- 9) Tagalakis V, Patenaude V, Kahn SR, Suissa S. Incidence of mortality from Venous Thromboembolism in a real-world population : The Q-VTE study cohort. *American Journal of Medicine* 2013;126(9):832.
- 10) Lapi F, Azoulay L, Niazi MT, Yin H, Benayoun S, Suissa S. Androgen deprivation therapy and risk of acute kidney injury in patients with prostate cancer. *JAMA* 2013;310(3):289-296.
- 11) McGoon MD, Benza RL, Escribano-Subias P, Jiang X, Miller DP, Peacock AJ, Pepke-Zaba J, Pulido T, Rich S, Rosenkranz S, Suissa S, Humbert M. Pulmonary arterial hypertension: epidemiology and registries. *J Am Coll Cardiol* 2013;62(65 Suppl).
- 12) Azoulay L, Benayoun S, Suissa S. Androgen deprivation therapy and acute kidney injury—reply. *JAMA* 2013;310(21):2313-4.
- 13) Preston IR, Suissa S, Humbert M. New perspectives in long-term outcomes in clinical trials of pulmonary arterial hypertension. *Eur Resp Rev* 2013;22(130):495-502.
- 14) Orriols L, Wilchesky M, Lagarde E, Suissa S. Prescription of antidepressants and the risk of road traffic crash in the elderly: a case-crossover study. *Br J Clin Pharmacol* 2013;76(5):810-5.
- 15) Suissa S, Patenaude V, Lapi F, Ernst P. Inhaled corticosteroids in COPD and the risk of serious pneumonia. *Thorax* 2013;68(11):1029-36.
- 16) Smiechowski B, Azoulay L, Yin H, Pollak MN, Suissa S. The use of metformin and colorectal cancer incidence in patients with type 2 diabetes mellitus. *Cancer Epidemiol Biomarkers Prev* 2013;22(10):1877-83.
- 17) Ernst P, Ariel A, Suissa S. Differences between asthmatics and nonasthmatics hospitalized with influenza A infection. *Eur Resp J* 2013;41(4):772-4.
- 18) Dormuth CR, Hemmelgarn BR, Paterson JM, James MT, Teare GF, Raymond CB, Lafrance JP, Levy A, Garg AX, Ernst P; Canadian Network for Observational Drug Effect Studies. Use of high potency statins and rates of admission for acute kidney

injury: multicenter, retrospective observational analysis of administrative databases. BMJ 2013;346:f880.

- 19) Yu O, Eberg M, Benayoun S, Aprikian A, Batist G, Suissa S, Azoulay L. Use of statins and the risk of death in patients with prostate cancer. J Clin Oncol 2014;32(1)5-11.

Articles published – Currently Ahead of Print

- 20) Azoulay L, Dell’Aniello S, Simon TA, Renoux C, Suissa S. Initiation of warfarin in patients with atrial fibrillation: early effects on ischaemic strokes. Eur Heart Journal 2013 Dec 18.
- 21) Fillion KB, Chateau D, Targownik LE, Gershon A, Durand M, Tamim H, Teare GF, Ravani P, Ersnt P, Dormuth CR. Proton pump inhibitors and the risk of hospitalization for community-acquired pneumonia: replicated cohort studies with meta-analysis. Gut 2013, July 15.

3. Academic and community engagement service outside of McGill by individual members of the unit

Submitted by:

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