

## Dr. Graeme Smith, MD, Ph.D.



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Graeme is a member of the Department of Obstetrics and Gynaecology at Queen's University. He also has cross-appointments with the Departments of Pharmacology and Toxicology, Anatomy and Cell Biology, and Diagnostic Radiology. Graeme has been affiliated with Queen's since 1999 and has held the rank of Full Professor in all departments since 2008.

In addition to his academic responsibilities, Graeme is an Obstetrics and Gynaecology Staff Physician and is the current Head of Labour and Delivery at the Kingston General Hospital. He is also the Director of the Queen's Perinatal Research Unit and a member of Queen's Faculty of Health Sciences Research Advisory Committee and Research Strategic Planning Committee. Graeme is a recipient of a Canadian Institutes of Health Research's (CIHR) New Investigators award, a Premier's Research Excellence Award, the Queen's University Faculty of Health Sciences Basmajian Research Award and the Queen's University Chancellor's Research Award. He is also the Principle Investigator for the CIHR/Heart and Stroke Foundation's funded Pre-eclampsia New Emerging Team (PE-NET).

Graeme has been a scientific reviewer for a number of journals including Lancet, New England Journal of Medicine, British Medical Journal, Journal of Obstetrics & Gynaecology Canada, American Journal of Obstetrics & Gynaecology, Obstetrics & Gynaecology, British Journal of Obstetrics & Gynaecology, and the Canadian Medical Association Journal. He has also served as a grant reviewer for such funding agencies as CIHR, Natural Science and Engineering Research Council of Canada, Ontario Heart

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and Stroke Foundation, Physicians' Services Incorporated Foundation (PSIF), Canadian Foundation for Women's Health (CFWH), and the Ontario Ministry of Health.

Graeme's research interests include:

- Pre-Eclampsia;
- Chorioamnionitis;
- Fetal Brain Injury.

Graeme has given over 80 presentations locally and nationally, and has published in 90 peer-reviewed journals as well as in 133 abstracts, editorials, case reports, book chapters and/or non-peer reviewed journals. He has been awarded ~7 million dollars as a Principal Investigator and ~27 million dollars collaborating as a Co-Investigator in peer-reviewed investigator-initiated research grants from agencies such as CIHR, PSIF, CFWH, Heart and Stroke Foundation, and the Ontario Federation of Cerebral Palsy.

A list of his peer-reviewed journal publications (as of April 14, 2009) includes:

- 1) Smith,G.N. for the APOG Research Committee. (2009) Resident Research Objectives. J Obstet Gynecol Canada (Submitted).
- 2) Gaudet, L.M., M.Flavin, O.Islam, G.N.Smith (2009) Chorioamnionitis is associated with diffusion MRI Findings. J Obstet Gynecol Canada (In Press, Nov 2008).
- 3) Gaudet, L.M., R.Dyzak, P.Hahn, S.Chamberlain, G.N.Smith (2008) Effectiveness of acupuncture for the induction of labour at term – a pilot randomized control trial. J Obstet Gynecol Canada 2008; 30(12): 1118–1123.
- 4) Hird, M.J., C.Canning, G.N.Smith (2009) Epistemology at the Core of Transdisciplinary Health Research. Critical Public Health. (In Press, Jan 2009) (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 5) Smith,G.N., M.C.Walker, A.Liu, S.W.Wen, M.Swansburg, H.Ramshaw, R.Rennicks White, M.Roddy, M.Hladunewich for the members of the PE-NET. (2009) A History of Pre-Eclampsia Identifies Women Who Have Underlying Cardiovascular Risk Factors. Am J Obstet Gynecol 200: 58e1-48e8. (Aug 7, e pub ahead of print). (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 6) Robinson, L., C.Spafford, T.Graham, G.N.Smith. (2009) Acute Caffeine-Induced Impairment in Insulin Sensitivity in Women with Gestational Diabetes Mellitus. J Obstet Gynecol Canada (In press, Nov 2008).
- 7) Liu, A., S.W.Wen, J.Bottomly, M.C.Walker, G.N.Smith (2009) Utilization of health care services of pregnant women complicated by preeclampsia in Ontario. Hypertens Pregnancy. 2009 Feb; 28(1):76-84. (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).

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- 9) Chen, X.K., S.W. Wen, J. Bottomley, G.N. Smith, A. Leader, Q. Yang, M.C. Walker (2009) In vitro fertilization is associated with an increased risk of preeclampsia. *Human Reprod* (In press, Sept 2008). (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 10) Wen, S.W., X.K. Chen, M. Rodger, R. Rennicks White, Q. Yang, G.N. Smith, R.J. Sigal, S. Perkins, M.C. Walker (2008) Folic acid supplementation in early second trimester and the risk of preeclampsia. *Am J Obstet Gynecol* 198: e1-45.e7.
- 11) Magee, L. et al. (G.N. Smith) (2008) Diagnosis, evaluation and management of the hypertensive disorders of pregnancy. *J Obstet Gynecol Canada* Mar; 30 (3 Suppl): S1.
- 12) Abou-Nassar, K., M. Rodger et al. (G.N. Smith) For the TIPPS investigators. (2007) The effect of dalteparin on coagulation activation during pregnancy in women with thrombophilia. A randomized trial. *Thromb Haemost* 98:163-71.
- 13) Chen, X.K., S.W. Wen, G.N. Smith, Q. Yang, M. Walker (2007) New-onset hypertension in late pregnancy and fetal growth: different associations between singletons and twins. *Hypertension in Pregnancy*. 2007; 26:259-72. (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 14) Chen, X.K., S.-W. Wen, G.N. Smith, Q. Yang, M.C. Walker (2007) Pregnancy-induced hypertension and infant mortality in triplets. *Int J Obstet Gynecol* 98(1):10-4. (May 18, Epub ahead of print). (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 15) Magee, L. et al (G.N. Smith) for the CHIPS Pilot Trial Collaborative Group. (2007) The Control of Hypertension in Pregnancy Study pilot trial. *BJOG*. 114(6):770, e13-20.
- 16) MacDonald, S., M. Walker, H. Ramshaw, M. Godwin, X.-K. Chen, G.N. Smith. (2007) Survey of Obstetrical Care providers understanding of long term risks and follow up of women with hypertensive disorders in pregnancy. *J Obstet Gynecol Canada* 29: 705-710. (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 17) Yang T., S.W. Wen, M.C. Walker, M.A. Beduz, P.C.W. Kim for the Fetal Alert Network (G.N. Smith) (2007) Women's satisfaction with the current state of prenatal care for pregnancies complicated by fetal anomalies: A survey of five academic perinatal units in Ontario. *J Obstet Gynecol Canada* 29:308-314.
- 18) Menzies J. et al. (G.N. Smith) for the PIERS Study Group. (2007) Instituting surveillance guidelines and adverse outcomes in preeclampsia: a single site study. *Obstet Gynecol* 110:121-127.
- 19) Rodger M.A. et al. (G.N. Smith) for the TIPPS Investigators. (2007) Long Term Dalteparin in Pregnancy is Not Associated with a Decrease in Bone Mineral Density: A Sub-Study of a Randomized Controlled Trial. *J Thromb Haemost* 5:1600-1606.
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- 21) Kim, P.C.W., M. Walker, G.N. Smith, et al. (2007) Fetal Alert Network (FAN): An Integrated Population Based Fetal Care Network; Linking Conception to Outcome. *Pediatrics Child Health* 12:369-372.

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- 22) Yang, T., S.W.Wen, M.C.Walker, M.A.Beduz, P.C.Kim for the Fetal Alert Network (G.N.Smith) (2007) Women's satisfaction with the current state of prenatal care for pregnancies complicated by fetal anomalies: A survey of five academic perinatal units in Ontario. JOGC 29:308-314.
- 23) Kim, P.C.W., M.Walker, M.-A.Beduz for the Fetal Alert Network (G.N.Smith) (2006). The Fetal Alert Network: An innovative program of access to care, surveillance, and education for birth defects in Ontario. JOGC 28; 1099-1102.
- 24) Sidle, E., R. Casselman, G.N.Smith (2007) The Effect of Cigarette Smoke on Placental Antioxidant Expression. Am J Physiol Regul Integr Comp Physiol 293(2):R754-8 (May 23; Epub). Ahead of print (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 25) Harnett, E.L. M.A.Dickinson, G.N.Smith (2007) Dose-Response LPS-Induced Fetal Brain Injury in the Guinea Pig. Am J Obstet Gynecol 197:179e1-179e7.
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- 27) S.Packenhams, S.M.Chamberlain, G.N.Smith (2006) Patients views on Elective Primary Caesarean Section. J Obstet Gynecol Canada 28:1089-1093.
- 28) Belkacemi, L., S.Bainbridge, M.Dickinson, G.N.Smith, C.Graham. (2007) Nitroglycerin inhibits hypoxia/reoxygenation-induced apoptosis in the syncytiotrophoblast of the human placenta: therapeutic implications for pre-eclampsia. Am J Pathol 170(3):909-20 (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET)
- 29) Smith, G.N., M.C.Walker, R.Windrim, K.O'Brien, A.Ohlsson for the Canadian Perinatal Network (2007) Randomized double-blind placebo-controlled trial of transdermal nitroglycerin for preterm labor. Am J Obstet Gynecol 197:37.e1-37.e8 (Editors' Choice article...see accompanying editorial: Iams, J.D. 2007; 197:4) (CIHR MCT-41550).
- 30) Chen, X.-K., S.W.Wen, G.N.Smith, Q.Yang, M.Walker. (2006) New onset hypertension in late pregnancy is associated with lower fetal and infant mortality in preterm twins. Hypertension in Pregnancy 25:205-215. (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
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- 36) Chen,X.K., Wen,S.W., Q.Yang, D.Krewski, G.N.Smith, M.Walker. (2006) Environmental lead exposure and pregnancy-induced hypertension. Environ Res 100:424-30 (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
- 37) Luo,Z.C, W.D.Fraser, C.I.Deal, P.Julien, F.Audibert, G.N.Smith, X.Xiong, M.Walker. (2006) Tracing the origins of “fetal origins” of adult disease: Programming by Oxidative Stress? Medical Hypothesis, 66: 38-44.
- 38) Swansburg, M.L., C.A.Brown, S.M.M.Hains, G.N.Smith, B.S.Kisilevsky. (2005) Comparison of maternal cardiac autonomic function and fetal heart rate in preeclamptic and normotensive pregnancies: An exploratory study. Can J Cardiovasc Nursing, 15:42-52. (PE-NET: CIHR FMI 63194 and HSFC PG-03-0175-PE-NET).
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- 40) Smith, G.N. for the Canadian Perinatal Network. (2005) Prevalence, Management and Outcomes of women who present with preterm premature rupture of the membranes. J Obstet Gynecol Canada 27;547-553.
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- 46) Alkazaleh, F., S. Viero, M. Simchen, M. Walker, G.Smith, C.Laskin, R.Windrim, J.Kingdom. (2004) Second Trimester Sonographic Recognition Of Placental Damage And Treatment With Heparin. Ultrasound in Obstetrics & Gynecology. 23:472-476.
- 47) Patrick, L.A., L.M.Gaudet, A.E.Farley, J.P.Rossiter, L.L.Tomalty, G.N.Smith (2004) Development of a Guinea Pig Model of Chorioamnionitis and Fetal Brain Injury. Am J Obstet Gynecol; 191: 1205-1211.
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- 51) Bustard, M., G.Ryan, M.E.Salienieks, G.N.Smith (2003) Human Maternal and Fetal Plasma Glyceryl Trinitrate Concentrations. *Am J Obstet Gynecol* 189: 1777-1778.
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