

Research Publications and Research Grants

(Dating from 2007 and revised for the Web Dec. 2008)

Department of Obstetrics & Gynaecology

Schulich School of Medicine & Dentistry

The University of Western Ontario

These department members have made contributions to the research literature since 2007

Maternal Fetal Medicine

- Dr. Andy Babwah
- Dr. Barbara de Vrijer
- Dr. Robert Gagnon
- Dr. Rob Gratton
- Dr. Fraser Fellows
- Dr. Dan Hardy
- Dr. Renato Natale
- Dr Fred Possmayer
- Dr. Tim Regnault
- Dr. Bryan Richardson
- Dr. David Somerset
- Dr. Francis Tekpetey
- Dr. Kaiping Yang

Reproductive Endocrinology and Infertility

- Dr. Valter Feyles
- Dr. Mellissa Mann
- Dr. Andrew Watson

Urogynaecology/Minimally Invasive Surgery

- Dr. Queena Chou
- Dr. George Vilos

Gynaecologic Oncology

- Dr. Monique A. Bertrand
- Dr. Michel Prefontaine
- Dr Trevor Shepard

Women's Health Research

- Dr. Jeff Nisker
- Dr. Debbie Penava

OB/GYN Research Publications and Research Grants from 2007

A. PUBLICATIONS

Maternal Fetal Medicine

Dr. Barbara de Vrijer

De Vrijer B, Davidsen ML, Wilkening RB, Anthony RV, Regnault, TR. Altered placental and fetal expression of IGFs and IGF-binding proteins associated with intrauterine growth restriction in fetal sheep during early and mid-pregnancy. *Pediatr Res*. 2006 Nov;60(5):507-12. Epub 2007 Sep 11.

Regnault TR, **de Vrijer B**, Galan HL, Wilkening RB, Battaglia FC, Meschia G. Development and mechanism of fetal hypoxia in severe fetal growth restriction. *Placenta*. 2007 Jul;28(7):714-23. Epub 2006 Sep 7.

Dr. Fraser Fellows

S. Saleem, J. Li, S.P. Yee, **F. Fellows**, C.G. Goodyer, R. Wang (2008) β 1 integrin/FAK stimulated MAPK/ERK pathway regulates human fetal islet cell development and survival. [submitted to *Cell Death & Differentiation*, MS#: CCD-07-0497]

M. Al-Masri, J. Li, **F. Fellows**, D. Carter, M.B. Wheeler, L. Rosenberg, C.G. Goodyer, R. Wang (2008) Gene expression profiling in the developing human fetal pancreas: microarray analysis (part II). [Submitted to *Diabetologia*, MS#: Diab-08-0136]

Dr. Robert Gagnon

Richardson BS, and **Gagnon R**. Behavioural state activity and fetal health & development. In: *Maternal-Fetal Medicine: 6th Edition*, eds. Creasy R.K. and Resnik R., WB Saunders Co. Philadelphia, Chapter 14, In press 2007.

Gagnon R and Ross Michael: Management of Oligohydramnios and Polyhydramnios. In: *Requisites in Obstetrics and Gynecology*. Chapter 24, In press, 2007.

Dr Dan Hardy

Refereed Papers

Coyle YM, Xie X, Ashfaq F, **Hardy DB**, and CR Mendelson (2007) Progesterone Receptor and not Estrogen Receptor Expression is a Marker for Early Stage Breast Cancer: Implications for Progesterone Receptor as a Therapeutic Tool and Target. *Cancer Letters*. 258: 253-261.

Janowski BA, Younger ST, **Hardy DB**, Ram R, Nguyen R, Huffman KE, and Corey DR. (2007) Activating gene expression in mammalian cells by promoter-targeted duplex RNAs. *Nature Chemical Biology*. 3: 166-173.

Book Chapters, Published

Mendelson CR, Condon JC, and **Hardy DB**. (2007) Regulation of Inflammatory Response Pathways During Pregnancy and Labor. In: *Preterm Birth: Mechanisms, Mediators, Prediction & Interventions* (Petraglia, Strauss, Gabbe, & Weiss, eds.)

Dr Fred Possmayer

Panupinthu N, Zhao L, **Possmayer F**, Ke HZ, Sims SM, and Dixon SJ. P2X7 Nucleotide Receptors Mediate Blebbing in Osteoblasts through a Pathway Involving Lysophosphatidic Acid. *J Biol Chem* 282: 3403-3412, 2007.

Bakshi, M. S., P. Sharma, T. S. Banipal, G. Kaur, KanjiroTorigoe, N. O. Petersen, and **F. Possmayer**. Lamellar phase supported synthesis of colloidal gold nanoparticles, nanoclusters, and nanowires. *Journal of nanoscience and nanotechnology* 7:916-924, 2007.

Beattie, J. R., C. Maguire, S. Gilchrist, L. J. Barrett, C. E. Cross, F. Possmayer, M. Ennis, J. S. Elborn, W. J. Curry, J. J. McGarvey, and B. C. Schock. The use of Raman microscopy to determine and localize vitamin E in biological samples. *Faseb J* 21:766-776, 2007.

Keating, E., L. Rahman, J. Francis, A. Petersen, **F. Possmayer**, R. Veldhuizen, and N. O. Petersen. Effect of cholesterol on the biophysical and physiological properties of a clinical pulmonary surfactant. *Biophys J*. 93: 1391-1401, 2007.

Manzanares, D., K. Rodriguez-Capote, S. Liu, T. Haines, Y. Ramos, L. Zhao, A. Doherty-Kirby, G. Lajoie, and **F. Possmayer**. Modification of tryptophan and methionine residues is implicated in the oxidative inactivation of surfactant protein B. *Biochemistry* 46:5604-5615, 2007.

Panda, A. K., K. Nag, R. R. Harbottle, **F. Possmayer**, and N. O. Petersen. Thermodynamic studies of bovine lung surfactant extract mixing with cholesterol and its palmitate derivative. *Journal of colloid and interface science* 311:551-555, 2007.

Zuo, Y. Y., and **F. Possmayer**. How does pulmonary surfactant reduce surface tension to very low values? *J Appl Physiol* 102:1733-1734, 2007.

Bakshi M. S., G. Kaur, P. Thakur, T. S. Banipal, **F. Possmayer** F, and N. O. Petersen. Surfactant selective synthesis of gold nanowires by using a DPPC-surfactant mixture as a capping agent at ambient conditions. *Journal of Physical Chemistry C* 111: 5932-5940, 2007.

Bakshi M. S., **F. Possmayer**, and N. O. Petersen. Simultaneous synthesis of Au and Cu nanoparticles in pseudo-core-shell type arrangement facilitated by DMPG and 12-6-12 capping agents. *Chemistry of Materials* 19: 1257-1266, 2007.

Bakshi, M. S., **F. Possmayer**, N. O. Petersen. Role of Different Phospholipids in the Synthesis of Pearl-Necklace Type Gold-Silver Bimetallic Nanoparticles as Bioconjugate Materials. *J. Phys. Chem. C* 111: 14113-14124, 2007.

Bakshi MS, Thakur P, Sachar S, Kaur G, Banipal TS, **Possmayer F**, and Petersen NO. Aqueous phase surfactant selective shape controlled synthesis of lead sulfide nanocrystals. *J Phys Chem C* 111: 18087-18098, 2007.

Orgeig, S., W. Bernhard, S. C. Biswas, C. B. Daniels, S. B. Hall, S. K. Hetz, C. J. Lang, J. N. Maina, A. K. Panda, J. Perez-Gil, **F. Possmayer**, R. A. Veldhuizen, W. Yan. The anatomy, physics, and physiology of gas exchange surfaces: Is there a universal function for pulmonary surfactant in animal respiratory structures? *Integrative and Comparative Biology*, 47: 610-627, 2007.

Dr. Tim Regnault

Wright CD, Orbus RJ, **Regnault TR**, Anthony RV, Effects of early gestation of GH administration on placental and fetal development in sheep. *J Endocrinol.* 2008 Jul;198(1):91-9. Epub 2008 Apr 22.

Rozance PJ, Limesand SW, Barry JS, Brown ID, Thorn SR, LoTurco D, **Regnault TR**, Frideman JE, Hay WW Jr. Chronic late-gestation hypoglycaemia upregulates hepatic PEPCK associated with increased PGC1alpha mRNA and phosphorylated CREB in fetal sheep. *Am J Physiol Endocrinol Metab.* 2008 Feb;294(2):E365-70. Epub Dec 4.

Ziebell BT, Galan HL, Anthony RV, **Regnault TR**, Parker TA, Arroyo JA. Ontogeny of endothelial nitric oxide synthase mRNA in an ovine model of fetal and placental growth restriction. *Am J Obstet Gynecol.* 2007 Oct;197(4):420.e1-5.

Lea RG, Wooding P, Stewart I, Hannah LT, Morton S, Wallace K, Aitken RP, Milne JS, **Regnault TR**, Anthony RV, Wallace JM. The expression of ovine placental lactogen, StAR and progesterone-associated steroidogenic enzymes in placentae of overnourished growing adolescent ewes. *Reproduction.* 2007 Apr; 133(4):785-96.

Regnault TR, Kudo Y, Glazier J, Roos S, Lewis RM, Jansson T. Heterodimeric amino acid transporters in the placenta—a workshop report. *Placenta.* 2007 Apr;28 Suppl A:S103-6. No abstract available.

Regnault TR, de Vrijer B, Galan HL, Wilkening RB, Battaglia RD, Meschia G. Development and mechanisms of fetal hypoxia in severe fetal growth restriction. *Placenta*. 2007 July;28(7);714-23. Epub 2006 Sep 7.

Dr. Bryan Richardson

Coughlin KW, Hernandez L, **Richardson BS**, da Silva OP. Life and death decisions in the extremely pre-term infant: what happens in a level III perinatal centre? *Paediatrics and Child Health* 12(7):557-562, 2007.

McCallum J, Smith N, Schwab M, Coksaygan T, Reinhardt B, Nathanielsz P, **Richardson B**. Effects of antenatal glucocorticoids on cerebral substrate metabolism in the preterm ovine fetus. *Am J Obstet Gynecol* 198:105.e1-105.e9, 2008.

McCallum J, Smith N, MacLachlan J, Coksaygan T, Schwab M, Nathanielsz P, **Richardson B**. Effects of antenatal glucocorticoids on cerebral protein synthesis in the preterm ovine fetus. *Am J Obstet Gynecol* 198:103.e1-103.e6, 2008.

Dy J, Guan H, Sampath-Kumar R, **Richardson BS**, Yang K. Placental 11 β -hydroxysteroid dehydrogenase type 2 is reduced in pregnancies complicated with idiopathic intrauterine growth restriction: evidence that this is associated with an attenuated ratio of cortisone to cortisol in the umbilical artery. *Placenta* 29(2):193-200, 2008.

Hamrahi H, Hemstreet S, Nygard K, **Richardson B**, Han V, Bocking A. Moderate intermittent umbilical cord occlusions with subsequent severe asphyxia is not associated with necrotic and apoptotic cell injury in the ovine fetal brain. In press *Reprod Sci* 2007.

Book Chapter

Richardson B.S., and Gagnon R. Behavioural state activity and fetal health & development. In: *Maternal-Fetal Medicine: 6th Edition*, eds. Creasy R.K. and Resnik R., WB Saunders Co. Philadelphia, Chapter 14, Submitted 2007.

Dr David Somerset

Publications

Fox C, Martin W, Somerset DA, Thompson PJ, Kilby MD (2007). Early Intraperitoneal Transfusion and Adjuvant Maternal Immunoglobulin Therapy in the Treatment of Severe Red Cell Alloimmunization prior to Fetal Intravascular Transfusion. *Fetal Diagn Ther*. 23(2):151-155

Presentations

Intra-peritoneal fetal blood transfusion and IvIgG to treat severe Rhesus Disease presenting prior to 20 weeks gestation.

Somerset DA, Martin B, Whittle MJ, Kilby MD. SMFM, San Francisco 2007.

Placental neuropeptides, physiology and function.

Somerset DA. 27th Annual Winter Neuro-Peptide Conference, Breckenridge 2007.

Dr Francis Tekpetey

Papers in Refereed Journals

Newton CR, Fisher J, Feyles V, **Tekpetey FR**, Hughes L, Isacson D. 2007. Changes in patient preferences in the disposal of cryopreserved embryos. *Human Reproduction* 22 (12): 3123-3128

Newton,CR, MacBride J, Feyles V, Tekpetey F, Power S. 2007. Factors affecting patients' attitudes toward single- and multiple-embryo transfer. *Fertility and Sterility* 87:269-278.

Nisker J, White A, **Tekpetey F**, Feyles V. 2007. Development and investigation of a free and informed choice process for embryo donation to stem cell research in Canada. *JOGC*: in press.

Wang HX, Tong D, El-Gehani F, **Tekpetey FR**, Kidder GM. 2007. Contributions of connexins to gap junctional coupling among human cumulus cells. *Human Reproduction*: *submitted*.

Papers in Non-refereed Journals

Haase J, **Tekpetey F**. 2007. The canadian assisted human reproduction act: implications for donor insemination. *Fertility Magazine* 6:52-54.

Dr. Kaiping Yang

Zhang T, Guan H, Arany E, Hill DJ & **Yang K** (2007) Maternal protein restriction permanently programs adipocyte growth and development in adult male rat offspring. *J Cell Biochem* 101, 381-388.

Zhang T, Guan H, Arany E, Hill DJ & **Yang K** (2007) Maternal protein restriction permanently programs adipocyte growth and development in adult male rat offspring. *J Cell Biochem* 101, 381-388.

Dy J, Guan H, Sampath-Kumar R, Richardson B & **Yang K** (2008) Placental 11 β -hydroxysteroid dehydrogenase type 2 is reduced in pregnancies complicated with idiopathic intrauterine growth

restriction: evidence that this is associated with an attenuated ratio of cortisone to cortisol in the umbilical artery. *Placenta* 29, 193-200.

Yang K, Guan H, Arany E, Hill DJ & Cao X (2008) Neuropeptide Y is produced in visceral adipose tissue and promotes proliferation of adipocyte precursor cells via the Y1 receptor. *FASEB J* 22, 2452-2464.

Balachandran A, Guan H, Sellan M, van Uum S & **Yang K** (2008) Insulin and glucocorticoid dynamically regulate adipocyte 11 β -hydroxysteroid dehydrogenase type 1. *Endocrinology* 149:4069-4070.

Guan H & **Yang K** (2008) RNA isolation and real-time quantitative RT-PCR. *Methods Mol Biol* 456:259-70.

Yang K (2008) *Adipose Tissue Protocols* (ISBN: 978-1-58829-916-1), Second Edition, Humana Press, Springer Science, Totowa, NJ.

Reproductive Endocrinology and Infertility

Dr. Valter Feyles

Newton C, Fisher J, **Feyles V**, Tekpetey F, Hughes L, Isacson D. Changes in patient preferences in the disposal of cryopreserved embryos. **2007**. *Human Reproduction*. 22(12):3124-3128

Edris F, Kerner C, **Feyles V**, Leung A, Power S. **2007**. Successful management of an extensive intracranial sinus thrombosis in a patient undergoing IVF: case report and review of literature. *Fertility and Sterility*. 88(3):705.e9-705.e14

Newton C, McBride J, **Feyles V**, Tekpetey F, Power S. 2007. Factors affecting patient's attitudes toward single- and multiple-embryo transfer. *Fertility and Sterility* 87(2):269-278.

2007 Invited Papers / Commentary:

Feyles V, Gianetto-Berruti A. 2007. Premature career decision-making: a new proposition. Core Competency Project: Commentary Papers from Medical Leaders. 2007. Royal College of Physicians and Surgeons of Canada website:
http://rcpsc.medical.org/residency/oenews/may07/documentation/Valter_Feyles.pdf

Newton C, McBride J, **Feyles V**. 2007. Single embryo transfer in IVF: helping patients to make informed decisions. *Creating Families: Canadian Journal of Reproductive Health (Infertility Awareness Association of Canada –IAAC- Journal)*. 2007;3(1):29-33.

Dr. Mellissa Mann

Kuzmin, K, Han, Z, **Golding, MC, Mann, MRW**, Latham, KE, and Varmuza, S, 2007, The PcG Gene *Sfmbt2* is Paternally Expressed in Extraembryonic Tissues, *Gene Expression Patterns* 8:107-116.

Weksberg, R, Shuman, C, Wilkins-Haug, L, **Mann, M**, Stewart, D, Croughan, M, Rakowsky, C, Leader, A, Hall, J, Friedman, JM, Simpson, JL, Holmes, L, Infante-Rivard, C, 2007, Workshop Report: Evaluation of Genetic and Epigenetic Risks Associated with Assisted Reproductive Technologies and Infertility. *Journal of Fertility and Sterility* 88:27-31.

Dr. Andrew J. Watson

Hickson JA, Fong B, Watson PH & **Watson AJ**. 2007. PP2C□□ (Ppm1d, WIP1), an endogenous inhibitor of p38 MAPK, is regulated along with Trp 53 and Cdkn2a following p38 MAPK inhibition during mouse preimplantation development. *Mol Reprod Dev.* 74:821-834.

Watson, A.J. 2007. Oocyte cytoplasmic maturation: a key mediator of both oocyte and embryonic developmental competence. *J Anim Sci* 85:1-3.

Fong, B., Watson, P.H., & **Watson, A.J.** 2007. Mouse preimplantation embryo responses to culture medium osmolarity include increased expression of OSM/CCM2/Malcaverin and p38 MAPK activation. Revised version submitted to *BMC Dev Biol.* 7:2.

Madan, P., & **Watson, A.J.**, 2007. Downregulation of Na/K-ATPase □1 subunit expression is required for blastocyst formation and normal assembly of trophectoderm tight junction associated proteins. *J Biol Chem* 282:12127-12134.

Calder, M.D., Madan P, & **Watson, A.J.** 2007. Detection of mRNAs encoding RNA binding proteins in cow oocytes and preimplantation embryos. *Zygote* In press.

Reproductive Endocrinology/Minimally Invasive Surgery

Dr. Queena Chou

Walter J., **Chou Q.**, MacMillan J. The Role of Concurrent Hysterectomy at Laparoscopic Burch Retropubic Colpourethropexy. *J Obstet gynaecol Can* 2007;29(6):S22.

Walter J., MacMillan J., **Chou Q.**, Wasser N., Scott T., Kawa S., King H. Optimal Surgical Management of Early Onset Pelvic Organ Prolapse. *J Obstet Gynaecol Can* 2007;29(6):S19.

Walter J., MacMillan J., **Chou Q.**, King H. A Comparison of Permanent versus Delayed-Absorbable Suture at Sacrospinous Ligament Vaginal Vault Suspension. *J Obstet Gynaecol Can* 2007;29(6):S22.

Dr George Vilos

Vilos GA, Ettler HC, Edris F, Hollett-Caines J, Abu-Rafea. Endometrioid adenocarcinoma treated by hysteroscopic endomyometrial resection. *J Min Invas Gynecol* 2007; 14(1): 119-22.

Edris F, **Vilos GA**, Al-Mubarak A, Ettler HC, Hollett-Caines J, Abu-Rafea B. Resectoscopic surgery may be an alternative to hysterectomy in high-risk women with atypical endometrial hyperplasia. *J Min Invas Gynecol* 2007; 14(1): 68-73.

Vilos GA, Edris F, Al-Murbarak A, Ettler HC, Hollett-Caines J, Abu-Rafea B. Hysteroscopic surgery does not adversely affect the long-term prognosis of women with endometrial adenocarcinoma. *J Min Invas Gynecol* 2007; 14(2): 205-10.

Vilos GA. Mechanisms of thermal injury to the lower genital tract with radiofrequency resectoscopic surgery. *J Min Invas Gynecol* 2007; 14: 389-91 (Letter).

Vilos GA, Ternamian A, Dempster J, Laberge PY. Laparoscopic Entry: A Review of Techniques, Technologies and Complications. SOGC Clinical Practice Guideline No. 193 May 2007. *J Obstet Gynecol Can* 2007; 29(5): 433-47.

Gynaecologic Oncology

Dr. Monique A. Bertrand

Policy Discussion Paper developed for the Ontario Women's Health Council, "Towards an Organized Cervical Screening Program in Ontario". Developed through collaboration with representatives from clinical, professional, government and consumer groups including **Monique A. Bertrand**, Terence J. Colgan, Michael Finkelstein, Erin Harris, Carol McDowell, Joan Murphy, Sara Taman, Frank E. Thompson. January 2007.

Lister contributor – Proceedings of the ASCCP Consensus Conference for the Management of Cytological Abnormalities and Cervical Cancer Precursors, National Cancer Institute, Bethesda, Maryland, September, 2007

Dr. Michel Prefontaine

Pantanowitz L., **Prefontaine M.**, Hunt JP. Cholelithiasis of the ovary after laparoscopic cholecystectomy: a case report. *Journal of Reproductive Medicine*. 52(10):968-70, 2007 Oct

Dr. Trevor Shepherd

Publications

Brigitte L. Theriault, **Trevor G. Shepherd**, Michelle L. Mujoomdar and Mark W. Nachtigal (2007) BMP4 signalling induces EMT and promotes the aggressive phenotype of human ovarian cancer cells. *Carcinogenesis* **28**: 1153-62

Women's Health Research

Dr. Jeff Nisker

Publications

Books edited

Clarke L, **Nisker J.** (Eds.) *In Our Hands: On Becoming a Doctor* Halifax. Pottersfield Press, 2007.

Nisker J. (Ed.) *From Fences to Chalcedonies: Stories From an Academic Health Sciences Centre*. Halifax. Pottersfield Press. In press 2008.

Papers in refereed journals

Mykitiuk R, **Nisker J.**, Bluhm R. The Canadian Assisted Human Reproduction Act: protecting women's health while potentially allowing human somatic cell nuclear transfer into non-human oocytes. *American Journal of Bioethics* Feb.2007;7(2):71-73.

Kharaboyan, L. Knoppers, B.M., Avard, D., **Nisker, J.** Understanding Umbilical Cord Blood Banking. *Women's Health Issues*. 2007;17(5):L277-280.

Nisker, J. The need for public education: "Surveillance and risk reduction strategies" for women at risk for carrying BRCA gene mutations. *J Obstet Gynaecol Can.* 2007;29(6):510-1.

Nisker, J. Vaccination against human papillomavirus. (Let) *CMAJ*. 2007;177(12):1526-1527

Caulfied T, Ogbogu U, Nelson E, Einsiedel E, Knoppers B, McDonald M, Brunger F, Downey R, Fernando K, Galipeau J, Geransar R, Grenier G, Hyun I, Isasi R, Kardel M, Knowles L, Kucic T,

Lotjonen S, Lyall D, Magnus D, Mathews DJH; Nisbet M, **Nisker J**, Pare G, Pattinson S, Pullman D, Rudnicki M, Williams-Jones B, Zimmerman S. Stem Cell Research Ethics: Consensus Statement on Emerging Issues. *J Obstet Gynaecol Can.* 2007;29(10):843-848.

Nisker J. Distributive Justice and Infertility Treatment in Canada. *JOGC.* In press 2008.

Mykitiuk R, Van Wagner E, **Nisker J.** Constructing “Health”, Defining “Choice”: Legal and Policy Perspectives on the Post-PGD Embryo in Four Jurisdictions. *Medical Law International* In press 2008.

Chapters in Books

Nisker J, Bergum V. A Child On Her Mind In: Bergum V, Van Der Zalm J (eds.) *Mother Life. Studies of Mothering Experience.* Pedagon Publishing 2007.

Nisker J. Introduction In: Bergum V, Van Der Zalm J (eds.) *Mother Life. Studies of Mothering Experience.* Pedagon Publishing 2007.

Nisker, J. Theatre as a health-policy research tool. In: Knowles JG, Cole AL. *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues.* Thousand Oaks, CA: Sage Publications 2007.

Nisker, J. Ethical Issues and Issues of Ethics. In: Knowles JG, Cole AL. *Handbook of the Arts in Qualitative Research: Perspectives, Methodologies, Examples, and Issues.* Thousand Oaks, CA: Sage Publications 2007.

Mykitiuk R, Van Wagner E, **Nisker J.** In: B. Bennett, T Cartey and I, Karpin (eds.). *Contemporary Perspectives on Health Law and Policy.* Sydney Australia: Federation Press In press 2008.

Mykitiuk R, Nisker J. Assisted Reproduction. In Peter A. Singer and A.M. Viens (eds.), *Bioethics for Clinicians.* Cambridge University Press. 2008.

Dr. Debbie Penava

Published Abstracts

de Vrijer B, Al-Shahrani M, **Penava D**, da Silva O, Richardson B. Impact of Fetal Gender on Pregnancy Complications and Neonatal Outcome. Society for Gynecologic Investigation 55th Annual Meeting, San Diego, USA,, March 26-29, 2008, Abstract 672, p 250A.

Nayot D, **Penava D**, de Vrijer B, da Silva O, Richardson B. The impact of latency time to delivery after preterm premature rupture of membranes (PPROM) on neonatal outcome. Society for Gynecologic Investigation 55th Annual Meeting, San Diego, USA,, March 26-29, 2008, Abstract 687, p 254A.

Jones C, Costescu D, Lent B, **Penava D**. Gender and unintended pregnancy: A web-based teaching modality for learners of women's health. Association of Professors of Obstetrics and Gynecology (APOG) Conference, 2007.

Andrus C, Chittle A, McDonald C, Renaud M, Scott S, Taylor S, Whyte G, **Penava D**. Dispensing Plan B in London, Ontario one year after schedule II status. Reproductive Health Conference, 2007.

Nayot D., **Penava D.**, de Vrijer B., Da Silva O., Richardson B. The impact of latency time to delivery after PPROM on neonatal outcome. Society of Obstetricians and Gynaecologists, Annual Clinical Meeting, 2007.

Al-Shahrani, M, **Penava, D**, Richardson, B, da Silva, O & de Vrijer, B. Fetal Gender: Impact on Pregnancy Complications and Neonatal Outcome. Submitted to Society of Obstetricians and Gynaecologists, Annual Clinical Meeting, 2007.

Penava, D, Watson, S, Strasser, S, Patel, R, Facey Crowther, L, Azad, N & Day, A. A Model of Collaboration in the Successful Development and Launch of a Distributed Medical Education Virtual Curriculum in Gender Health. Medical Education Conference, 2007.

B. Recent Research Funding Grants

Maternal Fetal Medicine

Dr. Andy Babwah

Canada Foundation for Innovation (CFI)/Ontario Research Fund (ORF) (Mann/Babwah). Systematic evaluation of assisted reproduction (joint application with CFI for matching funds (2006-2011)).

CFI Infrastructure Operating Funds (IOF). (Mann/Babwah). Systematic evaluation of assisted reproduction (joint application with CFI for matching funds (2006-2011)).

Canadian Institutes for Health Research (CIHR) (Operating) GnRH-RI activity during human placentation (2006-2009).

NSERC (Discovery). Molecular and Functional Analysis of Nuclear Membrane Localized GnRH-RI (2006-2011).

CIHR/ Institute of Human Development, Child and Youth Health (IHDCYH) (Operating). GnRH-RI activity during human placentation (2006-2007).

London Regional Cancer Program Development Council: Resource Request. Confocal Microscopy for Research at the Victoria Campus of the LHSC (June 2007).

Children’s Health Research Institute (CHRI). GnRH-regulated gene expression in the human placenta (2007).

Academic Enrichment Fund (AEF) Obstetrics and Gynaecology. GnRH-regulated TFPI-2 expression in the human placenta. (2007).

Canadian Institutes of Health Research New Investigator Award, offered in partnership with the Ontario Women’s Health Council and CIHR’s Institute of Gender and Health. (August 2007-July 2012).

Department of Obstetrics & Gynaecology Graduate Student Stipend to Dr. Andy Babwah for Michelle Re (2007).

CHRI Graduate Student Award to Dr. Andy Babwah for Michelle Re (2006).

Whaley Postdoctoral Fellowship to Dr. Andy Babwah for the recruitment of the postdoctoral fellow, Dr. Caroline Kahiri. Department of Obstetrics & Gynaecology.

CIHR Strategic Training Program in Cancer Research and Technology Transfer Graduate Student Stipend to Dr. Andy Babwah for Natasha Camuso (September 2007-August 2008).

Dr. Fraser Fellows

2007 . Multi-center, open-label, randomized study to assess the safety and contraceptive efficacy of two doses (in vitro 12 ug/24 h and 16 ug/24 h) of the ultra low dose levonorgestrel contraceptive intrauterine systems (LCS) for a maximum of 3 years in women 18 to 35 years of age. Sub-investigator.

Dr. Robert Gagnon:

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|------|------|---------|------------------------|------------|--|
| 2002 | 2008 | Co P.I. | P.I.: William Fraser | CIHR | Strategic training initiative for research in reproductive health sciences (STIRRHS) |
| 2004 | 2007 | Co P.I. | P.I.: Bryan Richardson | CIHR | Fetal brain development: The impact of acute and chronic hypoxia |
| 2005 | 2010 | Co P.I. | P.I.: Kaiping Yang | CIHR | Molecular mechanisms of fetal growth restriction |
| 2005 | 2010 | Co P.I. | P.I.: Victor Han | CIHR – RFA | Fetal growth restriction: mechanisms and outcomes |
| 2006 | 2008 | Co P.I. | P.I.: Barb | CIHR – | The influence of gender on differential |

| | | | | | |
|------|------|---------|----------------|----------------------------|---|
| | | | de Vrijer | STIRRHS | immunity responses of placenta and fetus |
| 2007 | 2007 | Co P.I. | P.I. Mark Weir | CIHR – STIRRHS | A qualitative analysis of the ethical decision-marking process used by key informants in the resuscitation of extremely premature infants |
| 2007 | 2007 | Co P.I. | P.I. Mark Weir | Dept Ob/Gyn Matching Funds | A qualitative analysis of the ethical decision-marking process used by key informants in the resuscitation of extremely premature infants |

Dr. Rob Gratton

Canadian Institutes of Health Research Operating Grant 2003 – 2008
‘Molecular mechanisms of preeclampsia’
-- Co-investigator

Canadian Institutes of Health Research Clinical Trials 2003 – 2008
‘International trial of anti-oxidant prophylaxis in pregnancy’ – Co-investigator

Canadian Institutes of Health Research Operating Grant 2005 – 2008
‘Value of quantitative MRI measures of white matter injury for predicting neurodevelopmental outcome of preterm infants’ – Co-investigator

Lawson Health Research Institute 2005 – 2007
‘Risk of pregnancy related hypertension in a cohort of women exposed to contaminated water compared to an age matched regional cohort’ – Co-investigator

Human Growth Foundation 2006 – 2007
‘Proteomics of fetal growth restriction (FGR): an analysis of maternal plasma – Co-investigator

Canadian Institutes of Health Research Operating IAPH 2006 – 2009
‘Capacity-building and participatory research development of a community-based nutrition & exercise lifestyle intervention program (NELIP) for pregnant & postpartum Aboriginal women’
– Strategic Initiative

Dr Fred Possmayer

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| Lipid-lipid and lipid-protein interactions in pulmonary surfactant F. Possmayer | CIHR |
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Dr. Bryan Richardson

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| CIHR ‘Fetal brain development: Impact of acute and chronic hypoxia’; PI | Operating Grant | 2004 - 2008 |
| Canada Research Chair (CRC), Tier 1 ‘Fetal/neonatal health and development’; PI | Research Chair | 2004 - 2011 |
| CIHR - IHDCYH ‘Fetal growth restriction: mechanisms and outcomes’; Co-Investigator | RFA -- Healthy Pregnancy | 2006 - 2011 |
| CHRI IRGF ‘Intrapartum fetal monitoring: markers of hypoxic related injury’; PI | | 2006 – 2007 |

Dr. Kaiping Yang

MAJOR PEER-REVIEWED RESEARCH FUNDING HELD & APPLIED FOR

| <u>Source:</u> | <u>Title:</u> |
|-----------------------|---|
| CIHR | Fetal Growth Restriction: Mechanisms & Outcomes RFA on Healthy Pregnancy. Co-Investigator (PI: V Han) |
| CIHR | Molecular Mechanisms of Fetal Growth Restriction Operating Grant. Principal-Investigator |
| HSFO | Early-life Origins of Visceral Adiposity Operating Grant. Principal-Investigator |

Reproductive Endocrinology and Infertility

Dr. Mellissa Mann

- Ontario Women's Health Council/CIHR Institute of Gender and Health New Investigator Award, *Molecular Analysis of Genomic Imprint Maintenance During Embryogenesis*, July 1, 2006 – June 30, 2011.

Grant Funding 2007

- Wighton/Perinatal Fund/Lawson Health Research Institute Internal Research Fund, *Functional Genomic Screen for Epigenetic Modifiers of Genomic Imprinting*, Principal and Sole Investigator, 06/2007-05/2009.
- University of Western Ontario, Department of Obstetrics and Gynecology, Academic Enrichment Fund, *Functional Genomic Screen for Epigenetic Modifiers of Genomic Imprinting*, Principal and Sole Investigator, 12/2006-11/2007.
- Canadian Institutes of Health Research Operating Grant, *Molecular Analysis of Genomic Imprint Maintenance During Embryogenesis*, Principal and Sole Investigator, 10/2006-09/2010.
- Ministry of Research and Innovation, Early Researcher Award, *Assisted Reproduction: Molecular and Developmental Effects of In Vitro Embryo Culture*, Principal and Sole Investigator, 09/2006-12/2011.
- Natural Sciences and Engineering Research Council of Canada Discovery Grant, *Identification and Evolutionary Comparison of Imprinting Centers*, Principal and Sole Investigator, 05/2006-04/2011.
- CIHR Institute of Human Development, Child and Youth Health Operating Grant for New Investigators, *Molecular Analysis of Genomic Imprint Maintenance During Embryogenesis*, Principal and Sole Investigator, 04/2006-03/2007.
- SickKids Foundation/CIHR Institute of Human Development, Child and Youth Health Operating Grant for New Investigators, *Susceptibility of Genomic Imprinting to Assisted Reproductive Technologies*, Principal and Sole Investigator, 04/06-03/08, \$129 540, declined.
- Canada Foundation for Innovation, Infrastructure Operating Fund, Co-Principal Investigator, 04/2006-03/2011.
- Canada Foundation for Innovation/MRI New Opportunities Fund, *Systematic Evaluation of Assisted Reproduction*, Co-Principal Investigator, 03/2006-02/2011.
- March of Dimes Birth Defects Foundation, Basil O'Connor Starter Scholar Award, *Genomic Imprinting in the Preimplantation Embryo*, Principal and Sole Investigator, 02/2006-01/2008.
- Canadian Institutes of Health Research RFA, *Fetal Growth Restriction: Mechanisms and Outcomes*, Co-Principal Investigator, 11/2005-10/2010.
- Lawson Health Research Institute Internal Research Fund, *Delayed Development and Genomic Imprinting*, Principal and Sole Investigator, 07/2005-06/2007.

Dr. Andrew J. Watson

2004-2007 CIHR Operating Grant “Trophectoderm differentiation and the blastocyst.”

2007-2012 Operating Grant- “Trophectoderm differentiation and the blastocyst.”

- 2003-2007 Strategic Initiative from the Institute of Human Development, Child and Youth Health, “Healthy Gametes Great Embryos”. “Towards single embryo transfer in the human” Tom Kennedy PI; Co-investigators Dr(s) Casper (U of T), Varmuza (U of T), Rancourt (Ucalgary), Nisker, Newton, Kidder, Feyles, Power, Tekpetey and Watson (UWO).
- 2003-2007 Multi-user Equipment and Maintenance Grant; PI. Dr Kem Rogers with Drs Derek Boughner, Peter Chidiac, David Litchfield, Nagalingam Rajakumer, Iiona Skerjanc, Paul Walton and Andrew J.
- 2005-2010 Discovery grant - The Maternal Environment: Influence on Early Mammalian Development.”

Urogynaecology/Minimally Invasive Surgery

Dr. Queena Chou

2007 Schulich Research Opportunities Program: Factors Influencing Patient’s decision making women undergoing surgical management of pelvic floor dysfunction.

2005-2007 Ob/GYN Academic Enrichment Fund Use of vaginal estrogen in women using pessaries for the treatment of pelvic organ prolapse or urinary incontinence;
Schulich Research opportunities program :

2000-2007 Ob/GYN Academic Enrichment Fund : Structural and functional difference in recurrent stress urinary incontinence.

Gynaecologic Oncology

Dr. Monique A. Bertrand

Grant award

Cancer Research Society “*Investigating the functional implications of ID1 and ID3 overexpression in human ovarian cancer pathogenesis*”; Co-applicant with Dr. Trevor Shepherd.

Dr. Trevor Shepherd

Cancer Research Society “*Investigating the functional implications of ID1 and ID3 overexpression in human ovarian cancer pathogenesis.*”

LHRI Internal Research Fund “*Determining the function of ID1 and ID3 proto-oncogenes in ovarian cancer initiation.*”

DoD Ovarian Cancer Research Program Concept Award “*Development of a Conditional Transgenic Mouse Model to Test the Fallopian Tube Origin of Serous Ovarian Cancer.*”

LRCP Small Grants “*Development of biological models for the translational ovarian cancer research initiative.*”

Women’s Health Research

Dr. Debbie Penava

Submitted Grants

Co-Investigator/Co-applicant, Prospective study of postpartum hypomania: prevalence, incidence, predictors and correlates, CIHR grant

Dr. Jeff Nisker

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|------|------|----------------|---|---|--|
| 2003 | 2008 | Kennedy, T. | Nisker, J.; Brennan, S.; McLeod, C.; Baylis, F. | CIHR Human Development Child and Youth Health Institute | Towards single embryo transfer in the human |
| 2006 | 2009 | Hegele, R | Nisker, J. Project Leader | Genome Canada | Ethical, Legal, and Societal Implications of Research into Monogenic-related Heart Disease and Monogenic-related Breast Cancer |
| 2006 | 2008 | Nisker, J.A. | | AMOSO | Ethics, Education, and Research Unit |
| 2007 | 2010 | Kevin Coughlin | Nisker, J., Marilyn Evans | CIHR | A qualitative analysis of the ethical decision-making process used by key informants in the resuscitation of extremely premature infants |