

## BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person.

**DO NOT EXCEED FOUR PAGES.**

NAME Patrick M. Catalano, M.D.		POSITION TITLE Professor	
eRA COMMONS USER NAME PCATALANO			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Providence College, Providence, RI	BA	1971	Biology
University of Vermont, College of Medicine, Burlington, VT	MD	1975	Medicine

### A. Positions and Honors

#### Positions and Employment

1975-1976 Rotating Internship, San Francisco General Hospital, San Francisco, CA  
1976-1978 National Health Service Corps, Cato, New York  
1978-1981 Residency, OB/GYN, University of Vermont, College of Medicine, Burlington, VT  
1981-1983 Fellowship, Maternal-Fetal Medicine, University of Vermont, College of Medicine  
1983-1989 Assistant Professor, OB/GYN, University of Vermont, College of Medicine  
1989-1992 Assistant Professor, Reproductive Biology, Center Case Western Reserve University  
1992-1997 Associate Professor with Tenure, Reproductive Biology, Case Western Reserve University/MetroHealth Medical Center, Cleveland, OH.  
1997- Professor with Tenure, Reproductive Biology, Case Western Reserve University  
1998- Chair, Reproductive Biology, Case Western Reserve University at MetroHealth Medical Center, Cleveland, OH.

#### Other Experience and Professional Memberships

1989-1991 Program Director, Perinatal Clinical Research Center, Case Western Reserve University at MetroHealth Medical Center  
1993-1998 Associate Program Director, General Clinical Research Center, Case Western Reserve University

Honors: 1975, Moses Dyer Carbee Prize; 1982, Mead Johnson Clinical Research Award; 1983, Sam Seed Fellowship; 1987, Society for Gynecologic Investigation; 1991, Society for Perinatal Research; 1992, Examiner, General Boards, American Board of Obstetrics and Gynecology; 1997, Examiner, Maternal-Fetal Medicine Subspecialty Boards; 1997, President, Society for Perinatal Research; 1998, American Gynecological and Obstetrical Society, 1999, Norbert Freinkel Award – Outstanding contributions to the field of diabetes and pregnancy, 2000; American Diabetes Association Pregnancy Council, 2002-2004; Distinguished Academic Achievement Award, University of Vermont, 2005; Society for Gynecologic Investigation Council, 2005-2008; Editorial Board, Diabetes 2004-2006; Editorial Board, Journal of Clinical Endocrinology and Metabolism 2004-2006; Board member, American Board of Obstetrics and Gynecology, Maternal-Fetal Medicine Division, 2007-Present.

#### Grant Review: NIH Ad Hoc Reviewer:

NICHD – Human Embriology and Metabolism  
Pregnancy and Neonatology  
GCRC/K-24/PO-1 Program Projects  
March of Dimes Grant Reviewer Study Section 2003 – 2008  
Kaiser Foundation  
Welcome Trust (United Kingdom)

## B. Selected peer-reviewed publications/books/chapters (from a list of 152):

1. Kirwan JP, Hauguel-de Mouzon S, Lepercq J, Challier JC, Huston-Presley L, Friedman JE, Kalhan SC, Catalano PM. TNF $\alpha$  is a predictor of insulin resistance in human pregnancy. *Diabetes*, 51:2207-13, 2002.
2. Catalano PM, Kirwan JP. Clinical utility and approaches for estimating insulin sensitivity in pregnancy. *Seminar in Perinatol*, 26:181-9, 2002.
3. Lepercq J, Hauguel-De Mouzon S, Timsit J, Catalano PM. Fetal macrosomia and maternal weight gain during pregnancy. *Diabetes Metab*, 28:323-8, 2002.
4. Okereke NC, Uvena-Celebrezze J, Huston-Presley L, Amini SB, Catalano PM. The affect of gender and gestational diabetes mellitus on cord leptin concentration. *Am J Obstet & Gynecol*, 187:798-803, 2002.
5. Catalano PM, Kirwan JP, Haugel-de Mouzon S, King J. Gestational diabetes and Insulin Resistance: Its role in the Short and Long Term Implications for Mother and Fetus. *Am J Clin Nutr*, 133:1674S-1683S, 2003.
6. Radaelli T, Varastehpour A, Catalano PM, Haugel-de Mouzon S. Increased inflammatory status in human pregnancy with GDM: Crucial role of placental genes. *Diabetes*, 52:2951-8, 2003.
7. Okereke N, Huston-Presley L, Amini SB, Kalhan S, Catalano PM. Longitudinal changes in energy expenditure and body composition in obese women with normal and impaired glucose tolerance. *Am J Physiol: Endocrin & Metab*, 287:E472-9, 2004
8. Durnwald C, Huston-Presley L, Amini S, Catalano P. Evaluation of body composition of large for gestational age infants of women with gestational diabetes compared with women with normal glucose tolerance. *Am J Obstet Gynecol*, 191(3) 804-8, 2004
9. Kirwan JP, Varastehpour A, Jing M, Presley L, Shao J, Friedman JE, Catalano PM. Reversal of insulin resistance postpartum is linked to enhanced skeletal muscle insulin signaling. *J Clin Endo & Metab*, 89: 4678-84, 2004.
10. Ehrenberg HM, Durnwald CP, Catalano PM, Mercer BM. The influence of obesity and diabetes on the risk of cesarean delivery. *AJOG*, 191: 969-74, 2004.
11. Ehrenberg HM, Mercer BM, Catalano PM. The influence of obesity and diabetes on the prevalence of macrosomia. *AJOG*, 191:964-8, 2004.
12. England LJ, Levine RJ, Qian C, Soule LM, Schisterman EF, Yu KF, Catalano PM. Glucose tolerance and risk of gestational diabetes in nulliparous women who smoke during pregnancy. *J of Epidemiology*, 15:160(12), 1205-13, 2004
13. Emery SP, Levine RJ, Qian C, Ewell MG, England LJ, Yu KF, Catalano PM for the CPEP Study Group. Twenty-four hour urine insulin as a measure of hyperinsulinemia/insulin resistance before onset of preeclampsia and gestational hypertension. *Br J of OB/GYN*, 112:1479-85, 2005
14. Radaelli T, Uvena-Celebrezze J, Minium J, Huston-Presley L, Catalano P, Hauguel-de Mouzon S. Maternal interleukin-6: Marker of fetal growth and adiposity. *J Soc Gynecol Invest*, 13:53-7, 2006.
15. Varastehpour A, Radaelli T, Minium J, Oretaga H, Herrera E, Catalano P, Hauguel-de Mouzon S. Activation of phospholipase A2 is associated with generation of placental lipid signals and fetal obesity. *J Clin Endocrin Metab*, 91:248-55, 2006.
16. Sacks DA, Liu AI, Wolde-Tsadik G, Amini SB, Huston-Presley L, Catalano PM. What proportion of birth weight is attributable to maternal glucose among infants of diabetic women? *AJOG*, 194:501-7, 2006.
17. Catalano PM, Ehrenberg HM. The short and long term implications of maternal obesity on the mother and her offspring. *Br J OB/GYN*, 113:1126-33, 2006.
18. Catalano PM, Hoegh M, Minium J, Huston-Presley L, Bernard S, Kalhan S, Hauguel-de Mouzon S. Adiponectin in human pregnancy: Implications for regulation of glucose and lipid metabolism. *Diabetologia*, 49:1677-85, 2006.
19. Hauguel-de Mouzon S, Lepercq J, Catalano PM. The Known and Unknown of Leptin in Pregnancy. *AJOG*, 194; 1537-45, 2006.
20. Lain KY, Catalano PM. Factors that affect maternal insulin resistance and modify fetal growth and body composition. *Metabolic Syndrome and Related Disorders*, 4:91-100, 2006.
21. Ismail-Beigi F, Catalano PM, Hanson RW. Metabolic programming: Fetal origins of obesity and metabolic syndrome in the adult. *Am J Physiol Endocrinol Metab*, 291:E439-40, 2006.
22. Catalano PM, Ehrenberg HM. The short and long term implications of maternal obesity on the mother and her offspring. *Br J Obstet & Gynecol*, 113:1126-33, 2006.
23. Sewell MF, Huston-Presley L, Super DM, Catalano PM. Increased neonatal fat mass, not lean body mass, is associated with maternal obesity. *AJOG*, 195:1100-3, 2006.

24. Catalano PM. Management of obesity in pregnancy. *Obstetrics and Gynecology*, 109:419-33, 2007.
25. Catalano PM, Thomas A, Huston-Presley L, Amini SB. Phenotype of infants of gestational diabetic mothers (GDM). *Diabetes Care: Proceedings of the Fifth International Workshop Conference on Gestational Diabetes Mellitus*, Suppl 2, S156-60, July, 2007.
26. Barbour LA, McCurdy CE, Hernandez TL, Kirwan JP, Catalano PM, Friedman JE. Cellular mechanisms for insulin resistance in normal pregnancy and gestational diabetes. *Diabetes Care: Proceedings of the Fifth International Workshop Conference on Gestational Diabetes Mellitus*, Suppl 2, S112-9, July, 2007.
27. Catalano PM. Editorial: Increasing Maternal Obesity and Weight Gain During Pregnancy: The Obstetric Problems of Plentitude. *Obstetrics and Gynecology*, 110:743-4, 2007.
28. Sewell MF, Huston-Presley L, Aminis S, Catalano PM. Body mass index, a true indicator of body fat in obese gravidas. *J Repro Med*, 52:907-11, 2007.
29. Lain KY, Catalano PM. Metabolic Changes in Pregnancy. *Clinical Obstetrics & Gynecology* 2007;50(4):938-948.
30. Friedman JE, Kirwan JP, Jing M, Presley L, Catalano PM. Increased skeletal muscle tumor necrosis factor-alpha and impaired insulin signaling persist in obese women with gestational diabetes mellitus 1 year postpartum. *Diabetes*, 57:606-13, 2008.
31. Challier JC, Bintein T, Basu S, Hotmire K, Minium J, Catalano PM, Hauguel-de Mouzon S. Obesity in pregnancy stimulates macrophage accumulation and inflammation in the placenta. *Placenta* 29(3):274-81, 2008.
32. Kitzmiller JL, Block JM, Brown FM, Catalano PM, et al. Managing preexisting diabetes for pregnancy: Summary of evidence and consensus recommendations for care. *Diabetes Care*, 31(5):1060-79, 2008.
33. Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Study Cooperative Research Group. Hyperglycemia and Adverse Pregnancy Outcomes. *New England Journal of Medicine*, 358:1999-2002, 2008.
34. Pinar H, Basu S, Hotmire K, Laffineuse L, Presley LK, Carpenter M, Catalano PM, Hauguel-de Mouzon S. High molecular weight multimer complexes and vascular expression contribute to high adiponectin in the fetus. *J Clin Endocrinol Metab* 93:2885-90, 2008.
35. Catalano PM, Singh K. A non paternalist approach to counseling patients with extremely premature delivery. *Virtual Mentor*, 10:240-42, 2008.
36. The HAPO Study Cooperative Research Group. Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Study. Associations with neonatal anthropometrics. *Diabetes*, 58:453-9, 2009.
37. Waters TP, Schultz BA, Mercer BM, Catalano PM. Effect of 17alpha-hydroxyprogesterone caproate on glucose intolerance in pregnancy. *Obstet Gynecol*, 114:45-9, 2009.
38. Catalano P, Presley L, Minium J, Hauguel-de Mouzon S. Fetuses of obese mothers develop insulin resistance in utero. *Diabetes Care*, 32:1076-80, 2009.
39. Radaelli T, Lepercq J, Varastehpour A, Basu S, Catalano PM, Hauguel-de Mouzon S. Differential regulation of genes for fetoplacental lipid pathways in pregnancy with gestational and type 1 diabetes mellitus. *Am J Obstet Gynecol*, 201:209.e1-10, 2009
40. Basu S, Laffineuse L, Presley L, Minium J, Catalano PM, Hauguel-de Mouzon S. In utero gender dimorphism of adiponectin reflects insulin sensitivity and adiposity of the fetus. *Obesity*, 17:1144-9, 2009.
41. Yogev Y, Catalano PM. Pregnancy and Obesity. *Obstet Gynecol Clin of N Am*, 36:285-300, 2009.
42. Landon MB, Spong CY, Thom E, et al. A multicenter, randomized trial of treatment for mild gestational diabetes. *NEJM*, 361:1339-48, 2009.
43. Catalano PM, Farrell K, Thomas A, Huston-Presley L, Mencin P, Hauguel-de Mouzon S, Amini SB. Perinatal risk factors for the childhood obesity and metabolic dysregulation. *Am J Clin Nutr*, 90:1303-13, 2009
44. Catalano PM, Presley L, Minium J, Hauguel-de Mouzon S. Fetuses of obese mothers develop insulin resistance in utero. *Diabetes Care*, 32:1076-80, 2009.
45. Rasmussen KM, Catalano PM, Yaktin AL. New guidelines for weight gain during pregnancy: What obstetrician/gynecologists should know. *Current Opinions Obstet Gynecol*, 2009, Accepted.
46. McIntyre HD, Chang AM, Callaway LK, Cowley DM, Dyer AR, Radaelli T, Farrell KA, Huston-Presley LP, Amini SB, Kirwan JP, Catalano PM, for the HAPO Study Cooperative Research Group. Hormonal and metabolic factors associated with variations in insulin sensitivity in human pregnancy. *Diabetes Care*, 2009. Accepted.
47. Radaelli T, Farrell K, Huston-Presley L, Amini S, Kirwan J, McIntyre HD, Catalano PM. Estimates of insulin sensitivity using glucose and C-Peptide from the HAPO glucose tolerance test. *Diabetes Care*, 2009 (In Press)

## **C. Research Support**

### **Ongoing Studies:**

NIHRO1HD22965 "*Insulin Resistance and Glucose and Lipid Metabolism in Pregnancy*"; PI; 4/1/07- 3/31/12

NIH HD-00-009 "Cooperative Multi-center Maternal Fetal Medicine Units (MFMU) Network"; Co-Investigator, TDC \$1,361,331; 4/01-3/11.

NIH RFA-DK-05-014 "Maternal over nutrition and offspring fat mass, metabolic and vascular function" Consultant; TDC \$1,000,000; 2/1/07-1/31/11.

NIH HD057236-01A1 "Omega-3 supplementation decreases inflammation and fetal obesity in pregnancy" ; Co-PI, TDC \$1,552,953; 8/1/09-7/31/11.

### **Completed Studies:**

RO1 HD34243 (Catalano – Co-I) 12/1/1998 - 2/28/07

NIH

*"Hyperglycemia & Adverse Pregnancy Outcome (HAPO)"*

American Diabetes Association (Catalano – PI) 1/1/04 – 12/31/06

ADA

*"Role of Placental Leptin in the Regulation of Fetal Growth and Adiposity"*

HD01273 (Catalano – PI)

7/99-11/06

NIH

*"Center for Study of Growth Regulation in Human Pregnancy"*