BIOGRAPHICAL SKETCH

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NAME: Norris, Andrew William

eRA COMMONS USER NAME: norrisaw

POSITION TITLE: Professor of Pediatrics & Biochemistry

EDUCATION/TRAINING *(Begin with baccalaureate, include postdoctoral training and residency.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion MM/YYYY	FIELD OF STUDY
Massachusetts Institute of Technology, Cambridge	S.B.	06/89	Chemistry
Washington University School of Med., St. Louis	Ph.D.	05/97	Molecular Biophysics
Washington University School of Med., St. Louis	M.D.	05/97	Medicine
University of Iowa Hospitals & Clinics, Iowa City	Residency	06/00	Pediatrics
Children's Hosp & Joslin Diabetes Center, Boston	Fellowship	06/03	Pediatric Endocrinology
Joslin Diabetes Center, Boston	Postdoctoral	06/04	Diabetes Research

A. Personal Statement

My basic and translational research expertise broadly regards the integrative physiology of diabetes across the life span. To this end, I have broad experience and training in molecular diabetes research, fetal metabolic physiology, lipid biochemistry, and bioinformatics of metabolic disease. My current research focus involves two projects. (1) My lab is working to better understand the molecular pathophysiology of cystic fibrosis related diabetes in translational and human clinical studies. (2) I am interested in the developmental events that modify later diabetes risk. To this end, my lab has developed a novel model of intrauterine diabetes exposure accomplished via unilateral infusion of macronutrients into the uterine artery of pregnant rats. Using this model we are characterizing the effect of hyperglycemic exposure on embryonic growth and development, and insulin sensitivity. As a physician-scientist who maintains clinical duties focused on children with diabetes, I am keenly aware of the need for diabetes research aimed at ultimately producing improved therapies. (✉corresponding author; ✍primary or co-primary author)

- Olivier AK, Yi Y, Sun X, Sui H, Liang B, Hu S, Xie W, Fisher JT, Keiser NW, Lei D, Zhou W, Yan Z, Li G, Evans TIA, Meyerholz DK, Wang K, Stewart ZA, **Norris AW**✉, Engelhardt JF✉. 2012. Altered Insulin Secretion And Impaired Endocrine Pancreas Function At Birth In Cystic Fibrosis Ferrets. J Clin Invest. 122:3755-68. PMCID: PMC3534166.
- Hu S, Yao J, Howe AA, Menke BM, Sivitz WI, Spector AA, & **Norris AW**✉. 2012. Peroxisome Proliferator-Activated Receptor gamma Decouples Fatty Acid Uptake from Lipid Inhibition of Insulin Signaling in Skeletal Muscle. Mol Endocrin. 26:977-88. PMCID:PMC3355543. *Featured in: cover art & editor's remarks*.
- Sun X, Yi Y, Xie W, Liang B, Winter MC, He N, Liu X, Luo M, Yu Y, Larson Ode K, Uc A, **Norris AW**✉, & Engelhardt JF✉. 2017. CFTR Influences Beta Cell Function and Insulin Secretion Through Non-Cell Autonomous Exocrine-Derived Factors. Endocrinology. 58:3325. PMCID: PMC5659686.
- Kua KL, Hu S, Wang C, Yao J, Dang D, Sawatzke AB, Segar JL, Wang K, & **Norris AW**✉. Late Gestational Hyperglycemia Induces Tissue Specific Fetal and Early Life Insulin Resistance. Journal of Endocrinology. *In Press*. doi.org/10.1530/JOE-18-0455

B. Positions and Honors

Positions and Employment

2000-2003	Clinical Fellow in Pediatrics	Harvard Medical School, Boston, MA
2003-2005	Research Associate	Joslin Diabetes Center, Boston, MA

2003-2005	Instructor in Pediatrics	Harvard Medical School, Boston, MA
2003-2005	Staff Physician	Joslin Diabetes Clinic, Boston, MA
2003-2005	Assistant in Endocrinology	Children's Hospital, Boston, MA
2003-2005	Active Staff	Beth Israel Deaconess Med Ctr, Boston, MA
2005-2012	Assistant Professor of Pediatrics	University of Iowa College of Medicine, Iowa City IA
2012-2018	Associate Professor of Pediatrics	University of Iowa College of Medicine, Iowa City IA
2012-	Associate Professor of Biochemistry	University of Iowa College of Medicine, Iowa City IA
2014-	Associate Director	Fraternal Order of Eagles Diabetes Research Center
2018-	Professor of Pediatrics	University of Iowa College of Medicine, Iowa City IA

Other Experience and Professional Memberships

2006-	Member, Society for Pediatric Research
2006-	Member, Lawson Wilkins Pediatric Endocrine Society
2007-	Member, American Diabetes Association
2015	NIH Study Section: CIDO, ad hoc reviewer
2016,2018	NIH Study Section: IPOD, ad hoc reviewer

Honors

1989	Phi Lambda Upsilon, MIT, Chemistry Honor Society
1989	Bernard Proctor Award, MIT, Undergraduate Research in Applied Biology
1994	Trainee Investigator Award, Clinical Research Meeting
1995	Olin Fellow, Washington University
1999,2000	Resident Teacher of the Year, Department of Pediatrics
1999-2000	American Academy of Pediatrics, Resident Research Grant Award
2001	Travel Grant, Endocrine Fellows Conference
2002	Genentech Travel Grant, Endocrine Society Annual Meeting
2004	Travel Grant, Endocrine Society
2004-2009	Research Career Development Award (K08), NIH
2007-2017	Listed in "Best Doctors in America" database
2009	Order of the Amaranth Award, American Diabetes Association
2012-2018	Castle Connolly "America's Top Doctors"
2013	US News World Report top 1% of physicians in specialty
2014	Fraternal Order of Eagles Diabetes Research Center Faculty Research Scholar Award
2019	American Pediatric Society, elected member

C. Contribution to Science (✉corresponding author; ✍ primary or co-primary author)

I. Integrated & Molecular Physiology of Diabetes: In a series of papers, I showed that thiazolidinediones and PPARγ have both direct and indirect actions on skeletal muscle that enhance insulin signaling. More recently, I have applied my integrated diabetes physiology expertise to collabortaive projects.

13. **Norris AW**✍, Chen L, Fisher SJ, Szanto I, Ristow M, Jozsi AC, Hirshman MF, Rosen ED, Goodyear LJ, Gonzalez FJ, Spiegelman BM, & Kahn CR. 2003. Muscle-Specific PPARγ Deficient Mice Develop Increased Adiposity and Hepatic Insulin Resistance but Respond to Thiazolidinediones. J Clin Invest, 112: 608-618. PMCID: PMC171387.
21. **Norris AW**✉✍, Hirshman MF, Yao J, Jessen N, Musi N, Chen L, Sivitz WI, Goodyear LJ, & Kahn CR. 2008. Endogenous Peroxisome Proliferator-Activated Receptor γ Augments Fatty Acid Uptake in Oxidative Muscle. Endocrinology. 149:5374-5383. PMCID: PMC2584586.
28. Hu S, Yao J, Howe AA, Menke BM, Sivitz WI, Spector AA, & **Norris AW**✉. 2012. Peroxisome Proliferator-Activated Receptor gamma Decouples Fatty Acid Uptake from Lipid Inhibition of Insulin

Signaling in Skeletal Muscle. Molecular Endocrinology. 26:977-88. PMCID:PMC3355543. *Featured in: cover art & editor's remarks*.

40. Gray LR, Sultana MR, Rauckhorst AJ, Oonthonpan L, Tompkins SC, Sharma A, , Fu X, Miao R, Pewa AD, Brown KS, Lane EE, Dohlman A, Zepeda-Orozco D, Xie J, Rutter J, **Norris AW**, Cox JE, Burgess SC, Potthoff MJ, & Taylor EB. 2015. Hepatic Mitochondrial Pyruvate Carrier 1 is Required for Efficient Regulation of Gluconeogenesis and Whole-body Glucose Homeostasis. Cell Metabolism. 22:669-81. PMCID: PMC4754674.

II. Fetal Diabetic Programming: By creating an innovative model of fetal hyperglycemic exposure accomplished via glucose infusion into the left uterine artery of pregnant rats, my lab substantiated the Pedersen hypothesis that hyperglycemia directly alters organogenesis, metabolism, and development.

34. Baack ML, Wang C, Hu S, Segar JL, & **Norris AW**✉. 2014. Hyperglycemia Induces Embryopathy, Even in the Absence of Systemic Maternal Diabetes: An In Vivo Test of the Fuel Mediated Teratogenesis Hypothesis. Reproductive Toxicology. 46:129-136. PMCID: PMC4067982
37. Sawatzke AB✍, **Norris AW**✍✉, Spyropoulos F✍, Walsh SA, Acevedo MR, Hu S, Yao J, Wang C, Sunderland JJ, & Ponto LLB. 2015. PET/CT Imaging Reveals Unrivaled Placental Avidity for Glucose Compared to Other Tissues. Placenta. 36:115-20. PMCID: PMC4298476.
39. Gordon EE, Reinking BE, Hu S, Yao J, Kua KL, Younes AK, Wang C , Segar JL, & **Norris AW**✉. Maternal Hyperglycemia Directly and Rapidly Induces Cardiac Septal Overgrowth in Fetal Rats. Journal of Diabetes Research. 2015:479565. PMCID: PMC4439465.
51. Kua KL, Hu S, Wang C, Yao J, Dang D, Sawatzke AB, Segar JL, Wang K, & **Norris AW**✉. Late Gestational Hyperglycemia Induces Tissue Specific Fetal and Early Life Insulin Resistance. Journal of Endocrinology. *In Press*.

III: Cystic Fibrosis-Related Diabetes: I am the lead endocrinologist on a scientific team investigating diabetes in humans, ferrets, and pigs with CF. Importantly, we have demonstrated islet-autonomous defects in insulin secretion induced by cystic fibrosis.

30. Olivier AK, Yi Y, Sun X, Sui H, Liang B, Hu S, Xie W, Fisher JT, Keiser NW, Lei D, Zhou W, Yan Z, Li G, Evans TIA, Meyerholz DK, Wang K, Stewart ZA, **Norris AW**✉, Engelhardt JF✉. 2012. Altered Insulin Secretion And Impaired Endocrine Pancreas Function At Birth In Cystic Fibrosis Ferrets. J Clin Invest. 122:3755-68. PMCID: PMC3534166.
41. Yi Y, Sun X, Gibson-Corley K, Xie W, Liang B, He N, Tyler SR, Uc A, Philipson LH, Wang K, Hara M, Larson Ode K, **Norris AW**✉, Engelhardt JF✉. 2016. A Transient Metabolic Recovery from Early Life Glucose Intolerance in Cystic Fibrosis Ferrets Occurs During Pancreatic Remodeling. Endocrinology. 157:1852-65. PMCID: PMC4870869.
42. Yi Y, **Norris AW**, Wang K, Sun X, Uc A, Moran A, Engelhardt JF, Larson Ode K. 2016. Abnormal Glucose Tolerance in Infants and Young Children with Cystic Fibrosis. American Journal of Respiratory and Critical Care Medicine. 194:974-980. PMCID: PMC5067820
45. Sun X, Yi Y, Xie W, Liang B, Winter MC, He N, Liu X, Luo M, Yu Y, Larson Ode K, Uc A, **Norris AW**✉, & Engelhardt JF✉. 2017. CFTR Influences Beta Cell Function and Insulin Secretion Through Non-Cell Autonomous Exocrine-Derived Factors. Endocrinology . 58:3325. PMCID: PMC5659686.

IV: Biomolecular Lipid Research: In my graduate work, I developed the now-standard assay for determination of retinoid-protein affinities. I subsequently parlayed this background into expertise regarding cellular and integrated lipid metabolism. My lab found that direct PPARγ action decouples fatty acid metabolism from lipotoxic inhibition of insulin resistance in skeletal muscle, suggesting that the “lipid-steal” hypothesis of PPARγ insulin sensitization is not an essential feature of thiazolidinedione treatment of diabetes.

2. **Norris AW**✍, Cheng L, Giguère V, Rosenberger M, & Li E. 1994. Measurement of subnanomolar retinoic acid binding affinities for cellular retinoic acid binding proteins by fluorometric titration. Biochim. Biophys. Acta. 1209 : 10 – 18.
4. **Norris AW**✍, Rong D, d'Avignon DA, Rosenberger M, Tasaki K, & Li E. 1995. Nuclear magnetic resonance studies demonstrate differences in the interaction of retinoic acid with two highly homologous retinoic acid binding proteins. Biochemistry 34 : 15564 – 15573.
10. **Norris AW**✉✍ & Spector AA. 2002. Very long chain n-3 and n-6 polyunsaturated fatty acids bind strongly to liver fatty acid-binding protein. J Lipid Res. 43:646-653.
28. Hu S, Yao J, Howe AA, Menke BM, Sivitz WI, Spector AA, & **Norris AW**✉. 2012. Peroxisome Proliferator-Activated Receptor gamma Decouples Fatty Acid Uptake from Lipid Inhibition of Insulin Signaling in Skeletal Muscle. Molecular Endocrinology. 26:977-88. PMCID:PMC3355543. *Featured in: cover art & editor's remarks*.

V: Bioinformatics of Metabolic Disease: I developed/published a mathematical approach to model false negative rates. To accomplish this, I developed a variety of bioinformatic skills that I have since collaboratively lent to a variety of other projects.

16. **Norris AW**✍ & Kahn CR. 2006. Analysis of Gene Expression in Pathophysiological States: Balancing False Discovery and False Negative Rates. Proc. Natl. Acad. Sci. USA. 103: 649-653. PMCID: PMC1334678.
17. Gesta S, Bluher M, Yamamoto Y, **Norris AW**, Berndt J, Kralisch S, Boucher J, Lewis C, & Kahn CR. 2006. Evidence for a Role of Developmental Genes in the Origin of Obesity and Body Fat Distribution. Proc. Natl. Acad. Sci. USA. 103: 6676-6681. PMCID: PMC1458940.
20. Tseng, Y-H, Kokkotou E, Schulz TJ, Huang TL, Winnay JN, Taniguchi CM, Tran TT, Suzuki R, Espinoza DO, Yamamoto Y, Ahrens MJ, Dudley AT, **Norris AW**, Kulkarni RN, & Kahn CR. 2008. Novel Role of Bone Morphogenetic Proteins in Brown Adipocyte Differentiation and Mitochondrial Biogenesis. Nature. 454:1000-1004. PMCID: PMC2745972.
32. **Norris AW**✍, Bahr T✍, Scholz TD, Peterson ES, Volk KA, & Segar JL. 2014. Angiotensin II induced cardiovascular load regulates cardiac remodeling and related gene expression in late gestation fetal sheep. Pediatric Research. 75:689-96. PMCID: PMC3607358.

52 of my peer-reviewed works are listed in MyBibliography:
http://www.ncbi.nlm.nih.gov/myncbi/browse/collection/49472254/?sort=date&direction=descending

D. Research Support

Ongoing Research Support

R01 DK115791 Norris, contact PI; Engelhardt PI 01/25/2018 – 12/31/2021
"Splanchno-Hormonal Mechanisms of Cystic Fibrosis Related Diabetes"
The proposed work aims to understand the causes and consequences of nearly absent circulating pancreatic polypeptide in cystic fibrosis patients.
Role: PI

R24 DK96518 Norris (PI), Engelhardt (PD) 08/15/2012 – 06/30/2019
"Early Pathogenesis of Cystic Fibrosis Related Diabetes"
This study is aimed at determining the islet-intrinsic, pancreatic-intrinsic, and gut-intrinsic mechanisms that control CFTR-dependent insulin secretion in ferrets, pigs, and young cystic fibrosis patients.
Role: PI

T32 DK112751 Norris (PI), Abel (PI) 07/01/2017 – 06/30/2022
"Diabetes Research Training Program"

Postdocs and clinical fellows on a competitive trajectory towards an academic research career in diabetes research may receive up to 2 years of support for scientific and career training in the University of Iowa Fraternal Order of Eagles Diabetes Research Center.
Role: PI

FOEDRC Norris (PI) 09/03/2014 – 09/02/2019
"Faculty Scholar Award"
This scholar grant is aimed at fostering innovative and creative mid-career investigation in the field of diabetes research.
Role: PI

R01 DK108835 Yang, PI 12/01/2017 – 11/30/2022
"Integration of Inflammation and Defective Autophagy by Nitrosylation Signaling in Obesity"
The major goals of this project are to investigate the role of obesity-associated lysosomal nitrosative stress on defective hepatic autophagy in obesity.
Role: Collaborator.

T32 HL07413 Scholz (PI) 07/01/2014 – 06/30/2019
"Fellowship Training Program in Pediatric Cardiology"
This is a research training grant to provide 2 years of research training to fellows in pediatric cardiology. Trainees are able to select research mentors at the University of Iowa whose research relates to cardiac development, cell and molecular biology, cardiovascular epidemiology, electrophysiology, and control of the circulation.
Role: Co-Investigator

Completed Research Support (*past three years*)

R01 DK097820 Norris (PI), Uc (PI/PD) 12/01/2012 – 08/31/2018
"Fatty Acid Defects & Oxidative Stress Modulate Islet Function in Cystic Fibrosis"
This study is aimed at understanding how CF-related polyunsaturated fatty acid abnormalities and redox stress affect islet function and structure in cystic fibrosis.
Role: PI

Completed Research Support (*beyond three years ago*)

Pilot Grant Norris (PI) 03/01/2014 – 02/28/2015
University of Iowa, Internal Funding Initiative Grant.
"Early Life Origins of Insulin Resistance."
Role: PI

R24-DK091211 Engelhardt(PI) 07/20/2011 – 06/30/2012
"Etiology of Cystic Fibrosis-related Diabetes in a CFTR-knockout Ferret"
This study is aimed at metabolic characterization of the newly created ferret model of cystic fibrosis.
Role: Collaborator

1-08-RA-142 Norris(PI) 01/01/2008 – 12/31/2010
American Diabetes Association
"Macronutrient contributions to fetal diabetic programming."
This study was aimed at understanding the impact of gestational exposure to isolated excess macronutrients.
Role: PI

K08 DK064906 Norris(PI) 7/01/04-9/30/2009
"Muscle PPARgamma and Metabolic Regulation."
This study was aimed at understanding the role of muscle PPARgamma in glucose homeostasis and energy regulation.
Role: PI

R01 DK081548 Norris(PI) 07/15/2009 – 03/31/2013
NIH/NIDDK
"Regulatory control of metabolic flexibility in skeletal muscle."
This study is aimed at understanding the role of muscle PPARgamma in lipid metabolism and insulin sensitivity.
Role: PI

R21 HD067661-01 Coryell(PI) 07/1/2012 – 06/30/2013
"Cytokines, PUFA Tissue Concentrations and Treatment Selection in Antenatal MMD"
Dr. Norris will collaboratively contribute lipid measurements to this study.
Role: Collaborator

Pilot Project Norris(PI) 07/01/2011 – 06/30/2013
Fraternal Order of Eagles Diabetes Research Center
"Effect of fetal hyperglycemia on beta-cell mass and function."
This pilot project is aimed at understanding how precisely-timed fetal hyperglycemia impacts beta-cell development and function.
Role: PI

Pilot Grant Norris (PI) 04/1/2012 – 03/31/2014
Center for Gene Therapy of Cystic Fibrosis
"The role of CFTR in hepatic insulin action"
This pilot project is aimed at understanding how CFTR loss induces insulin resistance in the liver.
Role: PI

Peer-reviewed Publications by Category

Focus Areas	Publications (numbered per below list)
Biomolecular Lipid Research	1,2,3,4,5,6,7,8,9,10,14,18,21,24,26,28,31,44
Molecular Physiology of Diabetes	12,13,16,17,19,20,21,22,23,25,27,28,30,31,33,34,35,36,37,38,39,40,41,42,43,45,46,47,51,52
Bioinformatics of Metabolic Disease	16,17,19,20,28,32,52
Fetal Diabetic Programming	22,23,24,25,29,32,34,37,39,51
Cystic Fibrosis-Related Diabetes	30,33,36,41,42,45,47,48,49,50,52

All Peer-reviewed Publications by Date (52 total peer-reviewed publications)

1. Cheng L, **Norris AW**, Tate BF, Rosenberger M, Grippo JF, & Li E. 1994. Characterization of the ligand binding domain of human retinoid X receptor α expressed in *Escherichia coli*. J. Biol. Chem. 269 : 18662 – 18667. PMCID: N/A (not applicable).
2. **Norris AW**✍, Cheng L, Giguère V, Rosenberger M, & Li E. 1994. Measurement of subnanomolar retinoic acid binding affinities for cellular retinoic acid binding proteins by fluorometric titration. Biochim. Biophys. Acta. 1209 : 10 – 18. PMCID: N/A (not applicable).
3. Alam M, Zhestkov V, Sani BP, Venepally P, Levin AA, Kazmer S, Li E, **Norris AW**, Zhang X-k, Lee M-O, Hill DL, Lin T-S, Brouilette WJ, & Muccio DD. 1995. Conformationally defined 6-s-trans-retinoic acid analogs. 2. Selective agonists for nuclear receptor binding and transcriptional activity. J. Med. Chem. 38 : 2302 – 2310. PMCID: N/A (not applicable).
4. **Norris AW**✍, Rong D, d'Avignon DA, Rosenberger M, Tasaki K, & Li E. 1995. Nuclear magnetic resonance studies demonstrate differences in the interaction of retinoic acid with two highly homologous retinoic acid binding proteins. Biochemistry 34 : 15564 – 15573. PMCID: N/A (not applicable).
5. Muccio DD, Brouilette WJ, Alam M, Vaezi MF, Sani BP, Venepally P, Reddy L, Li E, **Norris AW**, Simpson-Herren L, & Hill DL. 1996. Conformationally defined 6-s-trans-retinoic acid analogs. 3. Structure-activity relationships for nuclear receptor binding, transcriptional activity, and cancer chemopreventive activity. J. Med. Chem. 39 : 3625 – 3635. PMCID: N/A (not applicable).
6. Li E & **Norris AW**. 1996. Structure/function of cytoplasmic vitamin A-binding proteins. Annu. Rev. Nutr. 16 : 205 – 234. PMCID: N/A (not applicable).
7. **Norris AW**✍ & Li E. 1997. Generation and Characterization of Cellular Retinoic Acid-Binding Proteins from Escherichia coli Expression Systems. Methods Enzym. 282 : 3 – 13. PMCID: N/A (not applicable).
8. Tian K, **Norris AW**✍, Lin CL, & Li E. 1997. Interaction of retinoic acid with purified heterocomplexes of retinoic acid receptor and retinoid X receptor ligand binding domains: evidence for an indirect signaling pathway. Biochemistry 36 : 5669 – 5676. PMCID: N/A (not applicable).
9. Widstrom RL, **Norris AW**, & Spector AA. 2001. Binding of cytochrome P450 monooxygenase and lipoxygenase pathway products by heart fatty acid-binding protein. Biochemistry. 40, 1070 – 1076. PMCID: N/A (not applicable).
10. **Norris AW**✉✍ & Spector AA. 2002. Very long chain n-3 and n-6 polyunsaturated fatty acids bind strongly to liver fatty acid-binding protein. J Lipid Res. 43:646-653. PMCID: N/A (not applicable).
11. **Norris AW**✍ & Laffel L. 2002. Avoiding Nocturnal Hypoglycemia, Consideration of an Extra Injection Given at Bedtime. (Editorial.) Annals of Internal Medicine 136:547-549. PMCID: N/A (not applicable).
12. Wolfrum, C, Shih DQ, Kuwajima S, **Norris AW**, Kahn CR, & Stoffel M. 2003. Role of Foxa-2 in Adipocyte Metabolism and Differentiation. J Clin Invest, 112: 345-356. PMCID: PMC166300.
13. **Norris AW**✍, Chen L, Fisher SJ, Szanto I, Ristow M, Jozsi AC, Hirshman MF, Rosen ED, Goodyear LJ, Gonzalez FJ, Spiegelman BM, & Kahn CR. 2003. Muscle-Specific PPARγ Deficient Mice Develop Increased Adiposity and Hepatic Insulin Resistance but Respond to Thiazolidinediones. J Clin Invest, 112: 608-618. PMCID: PMC171387.

14. Widstrom RL, **Norris AW**, van der Veer J & Spector AA. 2003. Fatty Acid-Binding Proteins Inhibit Hydration of Epoxyeicosatrienoic Acids by Soluble Epoxide Hydrolase. Biochemistry, 42: 11762-11767. PMCID: N/A (not applicable).
15. **Norris AW**✉✍ & Svoren BM. 2005. Complications and Co-Morbidities of Type 2 Diabetes in Youth. Pediatr Ann, 34: 711-718. PMCID: N/A (not applicable).
16. **Norris AW**✍ & Kahn CR. 2006. Analysis of Gene Expression in Pathophysiological States: Balancing False Discovery and False Negative Rates. Proc. Natl. Acad. Sci. USA. 103: 649-653. PMCID: PMC1334678.
17. Gesta S, Bluher M, Yamamoto Y, **Norris AW**, Berndt J, Kralisch S, Boucher J, Lewis C, & Kahn CR. 2006. Evidence for a Role of Developmental Genes in the Origin of Obesity and Body Fat Distribution. Proc. Natl. Acad. Sci. USA. 103: 6676-6681. PMCID: PMC1458940.
18. Spector AA & **Norris AW**. Action of epoxyeicosatrienoic acids (EETs) on cellular function. 2007. Am J Physiol Cell Physiol. 292:C996-1012. PMCID: N/A (not applicable).
19. Katic M, Kennedy AR, Leykin I, **Norris A**, McGettrick A, Gesta S, Russell SJ, Bluher M, Maratos-Flier E & Kahn CR. 2007. Mitochondrial gene expression and increased oxidative metabolism: role in increased lifespan of fat-specific insulin receptor knock-out mice. Aging Cell. 6:827-839. PMCID: N/A (not applicable).
20. Tseng, Y-H, Kokkotou E, Schulz TJ, Huang TL, Winnay JN, Taniguchi CM, Tran TT, Suzuki R, Espinoza DO, Yamamoto Y, Ahrens MJ, Dudley AT, **Norris AW**, Kulkarni RN, & Kahn CR. 2008. Novel Role of Bone Morphogenetic Proteins in Brown Adipocyte Differentiation and Mitochondrial Biogenesis. Nature. 454:1000-1004. PMCID: PMC2745972.
21. **Norris AW**✉✍, Hirshman MF, Yao J, Jessen N, Musi N, Chen L, Sivitz WI, Goodyear LJ, & Kahn CR. 2008. Endogenous Peroxisome Proliferator-Activated Receptor γ Augments Fatty Acid Uptake in Oxidative Muscle. Endocrinology. 149:5374-5383. PMCID: PMC2584586.
22. Segar EM, **Norris AW**, Yao J-R, Hu S, Koppehnafer SL, Roghair RD, Segar JL & Scholz TD. 2009. Programming of growth, insulin resistance and vascular dysfunction in offspring of late gestation diabetic rats. Clinical Science. 117:129-38. PMCID: PMC2884292.
23. Yao J, Wang C, Walsh SA, Hu S, Sawatzke AB, Dang D, Segar JL, Ponto LLB, Sunderland JJ, & **Norris AW**✉. 2010. Localized Fetomaternal Hyperglycemia: Spatial and Kinetic Definition by Positron Emission Tomography. PLoS One. 5(8):e12027. PMCID: PMC2917372.
24. Joss-Moore LA, Wang Y, Baack ML, Yao J, **Norris AW**, Yu X, Callaway CW, McKnight RA, Albertine KH, & Lane RH. 2010. IUGR decreases PPARγ and SETD8 in neonatal rat lung and effects are ameliorated by maternal DHA supplementation. Early Human Development. 86:785-791. PMCID: PMC3138525.
25. **Norris AW**✉✍, Wang C, Yao J, Walsh SA, Sawatzke AB, Hu S, Sunderland JJ, Segar JL, & Ponto LLB. 2011. Effect of Insulin and Dexamethasone on Fetal Assimilation of Maternal Glucose. Endocrinology. 152:255-62. PMCID: PMC3219051.
26. Baack ML, **Norris AW**, Yao J, & Colaizy T. 2012. Long Chain Polyunsaturated Fatty Acid Levels in U.S. Donor Human Milk: Meeting the Needs of Premature Infants? Journal of Perinatology. 32:598-603. PMCID:PMC3369002.
27. **Norris AW** & Sigmund CD. 2012. A Second Chance for a PPARγ Targeted Therapy? Circulation Research. 110: 8-11. PMCID: PMC3583552.
28. Hu S, Yao J, Howe AA, Menke BM, Sivitz WI, Spector AA, & **Norris AW**✉. 2012. Peroxisome Proliferator-Activated Receptor gamma Decouples Fatty Acid Uptake from Lipid Inhibition of Insulin Signaling in Skeletal Muscle. Molecular Endocrinology. 26:977-88. PMCID:PMC3355543. *Featured in: cover art & editor's remarks*.

29. Katkhuda R, Peterson ES, Roghair RD, **Norris AW**, Scholz TD, & Segar JL. 2012. Sex-Specific Programming of Hypertension in Offspring of Late Gestation Diabetic Rats. Pediatric Research. 72:352-61. PMCID: PMC3607358.
30. Olivier AK, Yi Y, Sun X, Sui H, Liang B, Hu S, Xie W, Fisher JT, Keiser NW, Lei D, Zhou W, Yan Z, Li G, Evans TIA, Meyerholz DK, Wang K, Stewart ZA, **Norris AW**✉, Engelhardt JF✉. 2012. Altered Insulin Secretion And Impaired Endocrine Pancreas Function At Birth In Cystic Fibrosis Ferrets. J Clin Invest. 122:3755-68. (✉co-corresponding authors). PMCID: PMC3534166.
31. Lamping KL, Nuno DW, Coppey LJ, Holmes AJ, Hu S, Oltman CL, **Norris AW**, Yorek MA. 2013. Modification of high saturated fat diet with n-3 poly-unsaturated fat improves glucose intolerance and vascular dysfunction. Diabetes, Obesity and Metabolism. 15:144–152. PMCID: PMC3674571.
32. **Norris AW**✍, Bahr T✍, Scholz TD, Peterson ES, Volk KA, & Segar JL. 2014. Angiotensin II induced cardiovascular load regulates cardiac remodeling and related gene expression in late gestation fetal sheep. Pediatric Research. 75:689-96. PMCID: PMC3607358.
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