

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 Richard M. Mortensen MD PhD		POSITION TITLE Professor	
eRA COMMONS USER NAME (credential, e.g., agency login) rmmort			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Penn. State University State College, PA	B.S.	1976	chemistry/biochem
The Rockefeller University, New York,	Ph.D.	1983	cell biology
Cornell Univ. Medical College, New	M.D.	1984	medicine
Duke University Medical Center		1984-87	medical residency
Brigham and Women's, Harvard Med Sch		1987-90	endocrine fellowship
Harvard Medical School, Boston, MA	postdoc	1988-90	genetics

A. Professional Experience

- 1990 Associate Physician, Brigham and Women's Hospital, Boston, MA
- 1992 Assistant Professor of Medicine, Harvard Medical School, Boston, MA
- 2000 Associate Professor, Departments of Molecular and Integrative Physiology, Pharmacology and Internal Medicine, University of Michigan Medical School, Ann Arbor, MI
- 2008 Professor Departments of Molecular and Integrative Physiology, Pharmacology, and Internal Medicine, University of Michigan Medical School, Ann Arbor, MI

Licensure and Certification

- 1987 Massachusetts License Registration
- 1988 Diplomate, American Board of Internal Medicine
- 1989 Diplomate, American Board of Internal Medicine, Endocrinology Subspecialty
- 2000 Michigan Medical License

Honors and Awards

- 1991-1996 Clinician Scientist Award, American Heart Association
- 1997-2000 Established Investigator Award, American Heart Association

Federal Government Public Advisory Committee Service

- 1994 Cardiovascular and Renal Study Section (CVB), NIH, Reviewer, Feb
- 1994 Cardiovascular and Renal Study Section (CVB), NIH, Reviewer, Oct
- 1995 Experimental Cardiovascular Study Section (ECS), NIH, Reviewer, Feb
- 1997 Structural Biology of Cardiovascular Proteins (NIH Program Project) May
- 2000 NHLBI Program Project, Feb
- 2001 NHLBI Program Project, Sept
- 2003 Metabolism Study Section reviewer (MET) Feb
- 2005 NIDDK Program Project Dec
- 2006 Atherosclerosis and Inflammation Cardiovascular (AICS) NIH Reviewer June
- 2006 NIDDK Program Project Nov
- 2008 NHLBI Program Project May

B. Publications (selected from over 50)

- Mortensen, R.M., et al., *Embryonic stem cells lacking a functional inhibitory G-protein subunit (alpha i2) produced by gene targeting of both alleles.* Proc Natl Acad Sci U S A, 1991. **88**(16): p. 7036-40.

- Braley, L.M., et al., *Dose effect of adrenocorticotropin on aldosterone and cortisol biosynthesis in cultured bovine adrenal glomerulosa cells: in vitro correlate of hyperreninemic hypoaldosteronism.* Endocrinology, 1992. **131**(1): p. 187-94.
 - Field, S.J., et al., *Growth and differentiation of embryonic stem cells that lack an intact c-fos gene.* Proc Natl Acad Sci U S A, 1992. **89**(19): p. 9306-10.
 - Mortensen, R.M., et al., *Production of homozygous mutant ES cells with a single targeting construct.* Mol Cell Biol, 1992. **12**(5): p. 2391-5.
 - Mortensen, R.M., *Double knockouts. Production of mutant cell lines in cardiovascular research.* Hypertension, 1993. **22**(4): p. 646-51.
 - Lee, L.R., et al., *Thyroid hormone receptor-alpha inhibits retinoic acid-responsive gene expression and modulates retinoic acid-stimulated neural differentiation in mouse embryonic stem cells.* Mol Endocrinol, 1994. **8**(6): p. 746-56.
 - Li, Y., R. Mortensen, and E.J. Neer, *Regulation of alpha o expression by the 5'-flanking region of the alpha o gene.* J Biol Chem, 1994. **269**(44): p. 27589-94.
 - Mortensen, R.M. and J.G. Seidman, *Inactivation of G-protein genes: double knockout in cell lines.* Methods Enzymol, 1994. **237**: p. 356-66.
 - Raymond, J.R., et al., *Alpha 2A adrenergic receptors inhibit cAMP accumulation in embryonic stem cells which lack Gi alpha 2.* J Biol Chem, 1994. **269**(18): p. 13073-5.
 - Hartigan, J.A., et al., *Comparison of protein phosphorylation patterns produced in adrenal cells by activation of cAMP-dependent protein kinase and Ca-dependent protein kinase.* J Steroid Biochem Mol Biol, 1995. **53**(1-6): p. 95-101.
 - Braley, L.M., et al., *Effect of progesterone on aldosterone secretion in rats.* Endocrinology, 1996. **137**(11): p. 4773-8.
 - Carroll, J., et al., *Aldosterone-producing adenomas do not contain glucocorticoid-remediable aldosteronism chimeric gene duplications.* J Clin Endocrinol Metab, 1996. **81**(12): p. 4310-2.
 - Conner, D.A., et al., *beta-Arrestin1 knockout mice appear normal but demonstrate altered cardiac responses to beta-adrenergic stimulation.* Circ Res, 1997. **81**(6): p. 1021-6.
 - Ricupero, D.A., et al., *Enhanced bradykinin-stimulated phospholipase C activity in murine embryonic stem cells lacking the G-protein alphaq-subunit.* Biochem J, 1997. **327 (Pt 3)**: p. 803-9.
 - Sowell, M.O., et al., *Targeted inactivation of alpha i2 or alpha i3 disrupts activation of the cardiac muscarinic K+ channel, IK+ACh, in intact cells.* Proc Natl Acad Sci U S A, 1997. **94**(15): p. 7921-6.
 - Milstone, D.S., G. Bradwin, and R.M. Mortensen, *Simultaneous Cre catalyzed recombination of two alleles to restore neomycin sensitivity and facilitate homozygous mutations.* Nucleic Acids Res, 1999. **27**(15): p. e10.
 - Rosen, E.D., et al., *PPAR gamma is required for the differentiation of adipose tissue in vivo and in vitro.* Mol Cell, 1999. **4**(4): p. 611-7.
 - Ye, C., et al., *Galpha(i2), Galpha(i3) and Galpha(o) are all required for normal muscarinic inhibition of the cardiac calcium channels in nodal/atrial-like cultured cardiocytes.* J Mol Cell Cardiol, 1999. **31**(9): p. 1771-81.
 - Fu, Y., et al., *Endogenous RGS proteins and Galpha subtypes differentially control muscarinic and adenosine-mediated chronotropic effects.* Circ Res, 2006. **98**(5): p. 659-66.
 - Duan, S.Z., et al., *G(o) but not G(i2) or G(i3) is required for muscarinic regulation of heart rate and heart rate variability in mice.* Biochem Biophys Res Commun, 2007. **357**(1): p. 139-43.
 - Duan, S.Z., et al., *Hypotension, lipodystrophy, and insulin resistance in generalized PPARgamma-deficient mice rescued from embryonic lethality.* J Clin Invest, 2007. **117**(3): p. 812-22.
 - Duan, S.Z., et al., *Direct monitoring pressure overload predicts cardiac hypertrophy in mice.* Physiol Meas, 2007. **28**(11): p. 1329-39.
 - Ivashchenko, C.Y., et al., *PPAR-gamma knockout in pancreatic epithelial cells abolishes the inhibitory effect of Rosiglitazone on cerulein-induced acute pancreatitis.* Am J Physiol Gastrointest Liver Physiol, 2007.
 - Duan, S.Z., et al., *PPAR-gamma in the Cardiovascular System.* PPAR Res, 2008. **2008**: p. 745-804.
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- Duan, S.Z., M.G. Usher, and R.M. Mortensen, *Peroxisome proliferator-activated receptor-gamma-mediated effects in the vasculature*. *Circ Res*, 2008. **102**(3): p. 283-94.
- Ji, B., et al., *Robust acinar cell transgene expression of CreErT via BAC recombineering*. *Genesis*, 2008. **46**(8): p. 390-5.
- Ye, C.P., et al., *G(o) controls the hyperpolarization-activated current in embryonic stem cell-derived cardiocytes*. *Am J Physiol Heart Circ Physiol*, 2008. **294**(2): p. H979-85.
- Gupta, D., et al., *In vivo and in vitro studies of a functional peroxisome proliferator-activated receptor gamma response element in the mouse pdx-1 promoter*. *J Biol Chem*, 2008. **283**(47): p. 32462-70.

C. Research Support.

ONGOING

R01 HL083201 (PI Mortensen) 3/01/06-2/28/2010
NIH/NHLBI

Metabolic Responsive Factors in Cardiovascular Disease

The major goals are to elucidate the role of metabolic responsive transcription factors particularly PPAR-gamma in metabolic syndrome and risk for vascular disease

ADA Research Grant (PI Mortensen) 1/01/08 – 12/31/10

ADA Lipodystrophy and Insulin Resistance: Mechanisms of TZD Action

The major goal is to determine the mechanism of TZD action in a lipodystrophic model

COMPLETED (within the past three years)

R01 DK061501 Co-Investigator (PI. Craig Jaffe) 3/01/04-2/28/09
NIH

Physiological Importance of Growth Hormone Pulsatility

The goal is to understand the physiologic role of pulsatile growth hormone

P20GM069985 Co-Investigator (PI K.S. O'Shea) 9/29/03-8/31/07
NIH

"Michigan Center for hES Cell Research"

Medical School Core for human ES cells

Human ES cell Pilot Project Grant (PI Mortensen) 2/1/06-1/31/07

NIH/Michigan Center for hES Cell Research

Differentiation and characterization of hES derived endothelial cells

R01 HL070902 (PI Mortensen) 8/01/03-7/31/08
NIH/NHLBI

New G-protein Signaling Pathways

The major goals of this project are to define the G-protein initiated signaling pathways in the cardiovascular system and the cooperation and specificity of G-protein subtypes.