

Curriculum Vitae – Richard Warren Gross, M.D., Ph.D.

Date: July, 2015

Birthplace/date: New York, New York, December 6, 1950

Business Address: Washington University School of Medicine
Bioorganic Chemistry and Molecular Pharmacology
660 S. Euclid Avenue, Box 8020
St. Louis, Missouri, 63110
Telephone: 314-362-2690
Fax: 314-362-1402

Citizenship: United States of America

Office Address: East Building, 4525 Scott Avenue, Room 101
St. Louis, MO 63110
314-362-2690

Home Address: 307 Chesterfield Oaks
St. Louis, Missouri, 63005
636-537-0948

Present Position: Division Chief, Bioorganic Chemistry and
Molecular Pharmacology
Washington University School of Medicine
St. Louis, Missouri

Education: Columbia College, New York, New York,
A.B., 1972;
Organic Synthetic Chemistry; Gilbert Stork Ph.D.- Mentor

New York University Medical School, New York, New York
M.D., 1976

Washington University, St. Louis, Missouri
Ph.D., 1982 (Chemistry)
Magnetic Resonance; Samuel Weissman Ph.D.-Mentor

Residency: Internal Medicine, Barnes Hospital, St. Louis, Missouri
1976-78
David Kipnis M.D.-Mentor

Fellowship: Cardiology, Barnes Hospital, St. Louis, Missouri
1978-81
Burton Sobel M.D.-Mentor

Academic Positions: Assistant Professor of Medicine
Department of Internal Medicine
Washington University, St. Louis, Missouri
1982-86

Assistant Professor of Chemistry
Department of Chemistry
Washington University, St. Louis, Missouri
1984-86

Richard W. Gross
Associate Professor Medicine,
Department of Internal Medicine,
Washington University, St. Louis, Missouri
1987-91

Academic
Positions (cont.):

Associate Professor of Chemistry
Department of Chemistry
Washington University, St. Louis, Missouri
1987-91

Associate Professor of Pharmacology
Department of Molecular Biology and Pharmacology
Washington University, St. Louis, Missouri
1987-91

Director, Section of Molecular and
Cellular Cardiovascular Biochemistry
Washington University, St. Louis, Missouri
1987-91

Professor of Medicine
Department of Internal Medicine
Washington University, St. Louis, Missouri
1991-present

Professor of Chemistry
Department of Chemistry
Washington University, St. Louis, Missouri
1991-present

Professor of Developmental Biology
Department of Developmental Biology
Washington University, St. Louis, Missouri
1991-present

Division Chief, Bioorganic Chemistry and
Molecular Pharmacology
Washington University, St. Louis, Missouri
1992-present

Hospital
Appointments:

Barnes Hospital, St. Louis, MO
1982-Present

Medical Licensure/
Certification:

National Board of Medical Examiners,
1977
Missouri Medical License R8298,
Jan. 1978
American Board of Internal Medicine,
1979

Honors, Awards:

Phi Lambda Upsilon,
Columbia College, 1972
Solomon Shapiro Scholarship Award,
New York University, 1976
Buder-Peters Scholarship Award, St. Louis

Richard W. Gross

Heart Association 1978-81

Searle Scholar

1983-86

Established Investigator of the American
Heart Association, 1986-91

Appointments and
Committees Service:

Permanent Member of the Biophysics and Biochemistry of
Membranes Study Section, National Institutes of Health
(2008-2012)

NIH Cardiovascular Study Section (Ad Hoc Reviewer)
Biological Chemistry Program Planning Committee
(1992-1995)

Thesis Committees

External Advisory Board

University of Alabama SCOR in Ischemic Heart Disease
Scientific Board of Directors, Sphinx Pharmaceuticals Co.

Editorial
Service:

Advisory Board, University of Alabama
SCOR in Ischemic Heart Disease 1988-1992

Editorial Board, Journal of Molecular and Cellular Cardiology,
1987-1992

Editorial Board, Journal of Biological Chemistry 1993-1998

NIH Medicinal Biochemistry Study Section (Ad Hoc
Reviewer)

Permanent Member NIH Biochemistry and Biophysics of
Membranes Study Section- 2008-2012

Ad Hoc Reviewer- Journal of Biological Chemistry;
Journal of Clinical Investigation; Analytical Chemistry;
Journal of American Society of Mass Spectrometry;
Circulation Research; Circulation; American Journal of Physiology;
Biochem. Biophys. Acta; Lipids; Chemistry and Physics of Lipids;
Journal of Lipid Research; Endocrinology

Professional
Societies:

American Society of Biologic Chemistry
American Society for Clinical Investigation
American Chemical Society
American Federation of Clinical Research
American Heart Association
Basic Science Council of the American Heart Association
New York Academy of Sciences

Past Research Awards:

Buder-Peters Scholarship Award
St. Louis Heart Association (1978-81)
Searle Scholar (1983-86)

Established Investigator of the American Heart Association
(1986-91)

Research Support:

1) Principal Investigator, NIH (National Heart, Lung, and Blood Institute) RO1: Regulation of Myocardial Phospholipases and Lipases in Diabetic Myocardium, 2013-2017

2) Co-Investigator, NIH (National Institutes of Diabetes and Digestive and Kidney Diseases) Subcontract: Adipose Triglyceride Lipase (ATGL) in Lipotoxicity and The Metabolic Syndrome, 2011-2016, University of Pittsburgh

3) Program Director, NIH (National Heart, Lung, and Blood Institute) Program Project Grant: Membrane-Mediated Alterations in Diabetes, 1996-2014

4) Principal Investigator, NIH (National Heart, Lung, and Blood Institute), RO1: Lipid Mediators of Signal Transduction in Smooth Muscle, 2007-2014

Clinical, Teaching Responsibilities:

- 1) Attending Physician, Barnes Hospital Internal Medicine
- 2) The Chemistry of Biological Membranes (Chem 476)
- 3) Lipid Mediators of Signal Transduction; Special Topics

Peer-reviewed articles:

1. Gross RW, Sobel BE, Augmentation of cardiac phospholipase activity induced with negative liposomes. *Trans. Assoc. Am. Physicians* 1979; 92:136-147. PMID:549249.
2. Lee FC, Ahumada GG, Gross RW, Sobel BE, Hydrolysis of phosphatidyl-ethanolamine induced by nominally synthetic lysophosphoglycerides: Methodological implications. *Biochemistry* 1980; 19:1934-1937. PMID:7378384.
3. Gross RW, Sobel BE, Isocratic high-performance liquid chromatography separation of phosphoglycerides and lysophosphoglycerides. *J. Chromatogr.* 1980; 197:79-85. PMID:7430309.
4. Corr PB, Snyder DW, Cain ME, Crafford WA Jr., Gross RW, Sobel BE, Electrophysiological effects of amphiphiles on canine Purkinje fibers: Implications for dysrhythmia secondary to ischemia. *Circ. Res.* 1981; 49:354-363. PMID:7249272.
5. Saffitz JE, Gross RW, Williamson JR, Sobel BE, Autoradiography of phosphatidylcholine. *J. Histochem. Cytochem.* 1981; 29:371-378. PMID:7240719.
6. Gross RW, Sobel BE, Inhibition of myocardial lysophosphatidylcholine transacylase by palmitoylcarnitine: Implications for arrhythmogenesis. *Trans. Assoc. Physicians.* 1982; 94:115-125. PMID:7344217.
7. Corr PB, Snyder DW, Lee BI, Gross RW, Keim CR, Sobel BE, Pathophysiological concentrations of lysophosphatides and the slow response. *Am. J. Physiol.: Heart Circ. Physiol.* 1982; 12:H187-H195. PMID:7114230.
8. Gross RW, Corr PB, Lee BI, Saffitz JE, Crafford WA, Jr., Sobel BE, Incorporation of radiolabeled lysophosphatidylcholine into canine Purkinje fibers and ventricular muscle:

- Electrophysiological, biochemical and autoradiographic correlations. *Circ. Res.* 1982: 51:27-36. PMID:7083488.
9. Gross RW, Sobel BE, Lysophosphatidylcholine metabolism in the rabbit heart. Characterization of metabolic pathways and partial purification of myocardial lysophospholipase-transacylase. *J. Biol. Chem.* 1982: 257:6702-6708. PMID:7085596.
 10. Levine RP, Finn R, Gross RW, Interactions between C_{3b} and cell-surface macromolecules. *Ann. N.Y. Acad. Sci.* 1983: 421:235-245.
 11. Gross RW, Sobel BE, Rabbit myocardial cytosolic lysophospholipase: Purification, characterization, and competitive inhibition by L-palmitoylcarnitine. *J. Biol. Chem.* 1983: 258:5221-5226. PMID:6833297.
 12. Gross RW, Purification of rabbit myocardial cytosolic acyl-CoA hydrolase, identity with lysophospholipase, and modulation of enzymic activity by endogenous cardiac amphiphiles. *Biochemistry* 1983: 22:5641-5646. PMID:6140028.
 13. Gross RW, Drisdell RC, Sobel BE, Rabbit myocardial lysophospholipase-transacylase: Purification, characterization, and inhibition by endogenous cardiac amphiphiles. *J. Biol. Chem.* 1983: 258:15165-15172. PMID:6654912.
 14. Gross RW, Ahumada GG, Sobel BE, Cytosolic lysophospholipase in cardiac myocytes and its inhibition by L-palmitoylcarnitine. *Am. J. Physiol.* 1984: 246 (Cell Physiol. 15): C266-C270. PMID:6703040.
 15. Gross RW, High plasmalogen and arachidonic acid content of canine myocardial sarcolemma: A fast atom bombardment mass spectroscopic and gas chromatography-mass spectroscopic characterization. *Biochemistry* 1984: 23:158-165. PMID:6419772.
 16. Hashimoto H, Grace AM, Billadello JJ, Gross RW, Strauss AW, Sobel BE, Non-denaturing quantification of subforms of canine MM creatine kinase isoenzymes (isoforms) and their interconversion. *J. Lab. Clin. Med.* 1984: 103:470-484. PMID:6699467.
 17. Saffitz JE, Corr PB, Lee BI, Gross RW, Williamson EK, Sobel B, Pathophysiological concentrations of lysophosphoglycerides quantified by electron microscopic autoradiography. *Lab. Invest.* 1984: 50:278-286. PMID:6700193.
 18. Sobel BE, Gross RW, Robison AK, Thrombolysis, clot selectivity, and kinetics. *Circulation* 1984: 70:160-164. PMID:6539658.
 19. Fink KL, Gross RW, Modulation of canine myocardial sarcolemmal membrane fluidity by amphiphilic compounds. *Circ. Res.* 1984: 55:585-594. PMID:6091941.
 20. Gross RW, Purification and characterization of mitochondrial thioesterase from rabbit myocardium and its inhibition by palmitoylcarnitine. *Biochem. Biophys. Acta.* 1984: 802:197-202. PMID:6498215.
 21. Creer MH, Pastor C, Corr PB, Gross RW, Sobel BE: Quantification of choline and ethanolamine phospholipids in rabbit myocardium. *Anal. Biochem.* 1985: 144:65-74. PMID:3985327.
 22. Billadello JJ, Gard JK, Ackerman JJH, Gross RW, Determination of intact tissue glycerophosphorylcholine levels by quantitative ³¹P-nuclear magnetic resonance spectroscopy and correlation with spectrophotometric quantification. *Anal. Biochem.* 1985: 144:269-274. PMID:3985321.

23. Creer MR, Gross RW, Reverse-phase high-performance liquid chromatographic separation of molecular species of alkyl ether, vinyl ether, and monoacyl lysophospholipids. *J. Chromatogr.* 1985: 338:61-69. PMID:4040528.
24. Gross RW, Identification of plasmalogen as the major phospholipid constituent of cardiac sarcoplasmic reticulum. *Biochemistry* 1985: 24:1662-1668. PMID:3159423.
25. Wolf RA, Gross RW, Semi-synthetic approach for the preparation of homogeneous plasmenylethanolamine utilizing phospholipase D from *Streptomyces Chromofuscus*. *J. Lipid Res.* 1985: 26:629-633. PMID:4020302.
26. Wolf RA, Gross RW, Identification of neutral active phospholipase C which hydrolyzes choline glycerophospholipids and plasmalogen selective phospholipase A₂ in canine myocardium. *J. Biol. Chem.* 1985: 260:7295-7303. PMID:3997869.
27. Gard JK, Kichura GM, Ackerman JJH, Eisenberg JD, Billadello JJ, Sobel BE, Gross RW, Quantitative ³¹P NMR analysis of metabolite concentrations in Langendorff-perfused rabbit hearts. *Biophys. J.* 1985: 48:803-813. PMID:4074839.
28. Creer MH, Gross RW, Separation of isomeric lysophospholipids by reverse phase HPLC. *Lipids* 1985: 20:922-928. PMID:4094522.
29. Loeb LA, Gross RW, Identification and purification of sheep platelet phospholipase A₂ isoforms: Activation by physiologic concentrations of calcium ion. *J. Biol. Chem.* 1986: 261:10467-10470. PMID:3733714.
30. Pak JH, Bork VP, Norberg RE, Creer MH, Wolf RA, Gross RW, Disparate molecular dynamics of plasmenyl-choline and phosphatidylcholine bilayers. *Biochemistry* 1987: 26:4824-4830. PMID:2822100.
31. Miyazaki Y, Gross RW, Saffitz JE, Biochemical and subcellular distribution of arachidonic acid in rat myocardium. *Am. J. Physiol.* 1987: 253(Cell Physiol. 22):C846-853. PMID:3122582.
32. Ford DA, Gross RW, Identification of endogenous 1-*O*-alk-1'-enyl-2-acyl-*sn*-glycerol in myocardium and its effective utilization by choline phosphotransferase. *J. Biol. Chem.* 1988, 263:2644-2650. PMID:2830257.
33. Ford DA, Gross RW, Differential accumulation of diacyl and plasmalogenic diglycerides during myocardial ischemia. *Circ. Res.* 1989: 64:173-177. PMID:2909300.
34. Ford DA, Gross RW, Plasmenylethanolamine is the major storage depot for arachidonic acid in rabbit vascular smooth muscle cells and is rapidly hydrolyzed after angiotensin II stimulation. *Proc. Natl. Acad. Sci.* 1989: 86:3479-3483. PMID:2498871.
35. Scherrer LA, Gross RW, Subcellular distribution, molecular dynamics and catabolism of plasmalogens in myocardium. *Mol. and Cell. Biochem.* 1989: 88:97-105. PMID:2674669.
36. Ford DA, Miyake R, Glaser PE, Gross R.W, Activation of protein kinase C by naturally occurring ether-linked diglycerides. *J. Biol. Chem.* 1989: 264:13818-13824. PMID:2760045.
37. Steffens DL, Gross RW, Sequencing of cloned DNA using bacteriophage λgtII templates. *BioTechniques* 1989: 7:674-677. PMID:2534351.

38. Issacson Y, Sherbourne C, Gross RW, Stenson WF, The synthesis and molecular dynamics of phospholipids having hydroxylated fatty acids at the *sn*-2 position. *Chem. Phys. Lipids.* 1990: 52:217-226. PMID:2160333.
39. Ford DA, Gross RW, Activation of myocardial protein kinase C by plasmalogenic diglycerides. *Am. J. Physiol.* 1990: 258:(Cell Physiol. 27):C30-C36. PMID: 2154113.
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41. Hazen SL, Stuppy RJ, Gross RW, Purification and characterization of canine myocardial cytosolic phospholipase A₂: A calcium independent phospholipase with absolute *sn*-2 regio specificity for diradyl glycerophospholipids. *J. Biol. Chem.* 1990: 265:10622-10630. PMID:2355013.
42. Ford DA, Gross RW, Differential metabolism of diradyl glycerol molecular subclasses and molecular species by rabbit brain diglyceride kinase. *J. Biol. Chem.* 1990: 265:12280-12286. PMID:2165056.
43. Miyazaki Y, Gross RW, Sobel BE, Saffitz E, Selective turnover of sarcolemmal phospholipids during lethal cardiac myocyte injury. *Am. J. Physiol.* 1990: 259:(Cell Physiol. 28):C325-C331. PMID:2382705.
44. Hazen SL, Ford DA, Gross RW, Activation of a membrane-associated phospholipase A₂ during rabbit myocardial ischemia which is highly selective for plasmalogen substrate. *J. Biol. Chem.* 1991: 266:5629-5633. PMID:2005103.
45. Hazen SL, Zupan LA, Weiss RH, Getman DP, Gross RW, Suicide inhibition of canine myocardial cytosolic calcium-independent phospholipase A₂. *J. Biol. Chem.* 1991: 266:7227-7232. PMID:2016324.
46. Ford DA, Hazen SL, Saffitz JE, Gross RW, The rapid and reversible activation of a calcium-independent plasmalogen-selective phospholipase A₂ during myocardial ischemia. *J. Clin. Inv.* 1991: 88:331-335. PMID:1860859.
47. Zupan LA, Kruszka KK, Gross RW, Calcium is sufficient but not necessary for activation of sheep platelet cytosolic phospholipase A₂. *FEBS Letters* 1991: 284:27-30. PMID:2060623.
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50. Han X, Gross RW, Alterations in membrane dynamics elicited by amphiphilic compounds are augmented in plasmenylcholine bilayers. *Biochem. Biophys. Acta.* 1991: 1069:37-45. PMID:1932047.
51. Hazen SL, Gross RW, Human myocardial cytosolic calcium-independent phospholipase A₂ is modulated by ATP: Concordant ATP-induced alterations in enzyme kinetics and mechanism-based inhibition. *Biochem. J.* 1991: 280:581-587. PMID:1764021.

52. Han X, Gross RW, Proton nuclear magnetic resonance studies on the molecular dynamics of plasmenylcholine/ cholesterol and phosphatidylcholine/cholesterol bilayers. *Biochem. Biophys. Acta.* 1991: 1063:129-136. PMID:2015252.
53. Han X, Zupan LA, Hazen SL, Gross RW, Semisynthesis and purification of homogeneous plasmenylcholine molecular species. *Anal. Biochem.* 1992: 200:119-124. PMID:1317681.
54. Hazen SL, Gross RW, Identification and Characterization of human myocardial phospholipase A₂ from transplant recipients suffering from end stage ischemic heart disease. *Circ. Res.* 1992: 70:486-495. PMID:1537086.
55. Ramanadham S, Gross RW, Turk J, Arachidonic acid induces an increase in the cytosolic calcium concentration in single pancreatic islet beta cells. *Biochem. Biophys. Res. Comm.* 1992: V184:647-653.
56. Pak JH, Han X, Gross RW, Differential molecular dynamics and transmembrane fluidity gradients in canine myocardial sarcolemmal and sarcoplasmic reticulum. *Chem. Phys. Lipids* 1992: 61:111-119. PMID:1324803.
57. Zupan LA, Steffens DL, Berry CA, Landt MA, Gross RW, Cloning and Expression of a human 14-3-3 protein mediating phospholipolysis: Identification of an arachidonoyl-enzyme intermediate during catalysis. *J. Biol. Chem.* 1992: 267:8707-8710. PMID:1577711.
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59. Miyake R, Gross RW, Multiple phospholipase A₂ activities in canine vascular smooth muscle. *Biochem. Biophys. Acta.* 1992: 1165:167-176. PMID:1450211.
60. Han X, Gross RW, Nonmonotonic alterations in the fluorescence anisotropy of polar head group labeled fluorophores during the lamellar to hexagonal phase transition of phospholipids. *Biophys. J.* 1992: 63:309-316. PMID:1420879.
61. Gross RW, Myocardial phospholipase A₂ and their membrane substrates. *Trends Cardiovasc. Med.* 1992: 2:115-121.
62. Zupan LA, Weiss RH, Hazen SL, Parnas BL, Aston KW, Lennon RJ, Getman DP, Gross RW, Structural determinants of haloenol lactone-mediated suicide inhibition of canine myocardial calcium-independent phospholipase A₂. *J. Med. Chem.* 1993: 36:95-100. PMID:8421294.
63. Gross RW, Ramanadham S, Kruszka KK, Han X, Turk J, Rat and human pancreatic islet cells contain a Ca²⁺-independent phospholipase A₂ activity selective for hydrolysis of arachidonate which is stimulated by ATP and is specifically localized to islet β -cells. ***Biochemistry*** 1993, 32:327-336. PMID:8418853.
64. Ramanadham S, Gross RW, Han X, Turk J, Inhibition of arachidonate release by secretagogue-stimulated pancreatic islets suppresses both insulin secretion and the rise in β -cell cytosolic Ca²⁺ concentration. *Biochemistry* 1993: 32:337-346. PMID:8418854.
65. Goligorsky MS, Morgan MA, Lyubsky S, Gross RW, Adams DT, Spitz DR: Establishment of a hydrogen peroxide resistant variant of renal tubular epithelial cells. Role of calcium-

- independent phospholipase A₂ in cell damage. Arch. Biochem. Biophys. 1993: 301:119-128. PMID:8442655.
66. Hazen SL, Hall CR, Ford DA, Gross RW: Isolation of a human myocardial cytosolic phospholipase A₂ isoform: Fast atom bombardment mass spectroscopic and reverse phase HPLC identification of choline and ethanolamine glycerophospholipid substrates. J. Clin. Invest. 1993: 91:2513-2522. PMID:8514863.
 67. Hazen SL, Gross RW: The specific association of a phosphofructokinase isoform with myocardial calcium-independent phospholipase A₂: Implications for the coordinated regulation of phospholipolysis and glycolysis. J. Biol. Chem. 1993: 268:9892-9900. PMID:8486669.
 68. Ramanadham S, Bohrer A, Muelle M, Jett P, Gross RW, Turk J: Mass spectrometric identification and quantitation of arachidonate-containing phospholipids in pancreatic islets: Prominence of plasmenylethanolamine molecular species. Biochemistry 1993: 32:5339-5351. PMID:8499439.
 69. Chen X, Han X, Gross RW: Dynamics of binary mixtures of plasmenylcholine/arachidonic acid and phosphatidylcholine/arachidonic acid - a study using fluorescence and NMR spectroscopy. Biochem. Biophys. Acta. 1993: 1149:241-248. PMID:8323943.
 70. Lehman JJ, Brown KA, Ramanadham S, Turk J, Gross RW: Arachidonic acid release from aortic smooth muscle cells induced by [Arg⁸]-vasopressin is largely mediated by calcium-independent phospholipase A₂. J. Biol. Chem. 1993: 268:20713-20716. PMID:8407892.
 71. Ramanadham S, Bohrer A, Gross RW, Turk J: Mass Spectrometric Characterization of Arachidonate-Containing Plasmalogens in Human Pancreatic Islets and in Rat Islet β -Cells and Subcellular Membranes. Biochemistry 1993: 32:13499-13509. PMID:8257685.
 72. Hazen SL, Wolf MJ, Ford DA, Gross RW: The rapid and reversible association of phosphofructokinase with myocardial membranes. FEBS Lett. 1994: 339:213-216. PMID:8112458.
 73. Kruszka KK, Gross RW: The ATP- and CoA-independent synthesis of arachidonylethanolamide: A novel mechanism underlying the synthesis of the endogenous ligand of the cannabinoid receptor. J. Biol. Chem. 1994: 269:14345-14348. PMID:8182035.
 74. Glaser P, Gross R W: Plasmenylethanolamine facilitates rapid membrane fusion: A stopped-flow kinetic investigation correlating the propensity of a major plasma membrane constituent to adopt an H_{II} phase with its ability to promote membrane fusion. Biochemistry 1994: 33:5805-5812. PMID:8180209.
 75. Ramanadham S, Wolf MJ, Jett PA, Gross RW, Turk J, Characterization of an ATP-stimulatable Ca²⁺-Independent phospholipase A₂ from clonal insulin-secreting HIT cells and rat pancreatic islets. Biochemistry 1994: 33:7442-7452. PMID:8003509.
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77. Chen X, Gross RW, Phospholipid subclass-specific alterations in the kinetics of ion transport across biologic membranes. *Biochemistry* 1994: 33:13769-13774. PMID:7947788.
78. Fantl WJ, Muslin AJ, Kikuchi A, Martin JA, MacNicol AM, Gross RW, Williams LT, Activation of Raf-1 by 14-3-3 proteins. *Nature* 1994: 371:612-614. PMID:7935795.
79. Han X, Gross RW, Electrospray ionization mass spectroscopic analysis of human erythrocyte plasma membrane phospholipids. *Proc. Natl. Acad. Sci. USA* 1994: 91:10635-10639. PMID:7938005.
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83. Gross RW, Rudolph AE, Wang J, Sommers CD, Wolf MJ, Nitric oxide activates the glucose-dependent mobilization of arachidonic acid in a macrophage-like cell line (RAW 264.7) that is largely mediated by calcium-independent phospholipase A₂. *J. Biol. Chem.* 1995: 270:14855-14858. PMID: 7797462.
84. Wang K, Han X, Gross RW, Gokel GW, Direct evidence for arylmethyl ether coordination of sodium and potassium cations:an electrospray ionization mass spectrometry study. *J. Amer. Chem. Soc.* 1995: 117:7680-7686.
85. Glaser PE, Gross RW, Rapid plasmenylethanolamine-selective fusion of membrane bilayers catalyzed by an isoform of glyceraldehyde-3-phosphate dehydrogenase: Discrimination between glycolytic and fusogenic roles of individual isoforms. *Biochemistry* 1995: 34:12193-12203. PMID: 7547960.
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87. Wolf MJ, Izumi Y, Zorumski CF, Gross RW, Long-term potentiation requires activation of calcium-independent phospholipase A₂. *FEBS Lett.* 1995: 377:358-362. PMID: 8549755.
88. Ma Z, Ramanadham S, Corbett JA, Bohrer A, Gross RW, McDaniel ML, Turk J, Interleukin-1 enhances pancreatic arachidonic acid 12-lipoxygenase product generation by increasing substrate availability through a nitric oxide-dependent mechanism. *J. Biol. Chem.* 1996: 271(2):1029-1042. PMID: 8557627.
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92. Ramanadham S, Wolf MJ, Ma Z, Li B, Wang J, Gross RW, Turk J, Evidence for association of an ATP-stimulatable Ca^{2+} -independent phospholipase A_2 from pancreatic islets and HIT insulinoma cells with a phosphofructokinase-like protein. *Biochemistry* 1996: 35:5464-5471. PMID: 8611537.
93. Ford DA, Han X, Horner CC, Gross RW, Accumulation of unsaturated acylcarnitine molecular species during acute myocardial ischemia: metabolic compartmentalization of products of fatty acyl chain elongation in the acylcarnitine pool. *Biochemistry* 1996: 35:7903-7909. PMID: 8672492.
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97. Wolf MJ, Wang J, Turk J, Gross RW, Depletion of intracellular calcium stores activates smooth muscle cell calcium-independent phospholipase A_2 : A novel mechanism underlying arachidonic acid mobilization. *J. Biol. Chem.* 1997: 272:1522-1526. PMID: 8999823.
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Invited Publications:

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29. Yang K, Kiebish MA, Gross RW, Methodological Requirements for Lipidomics Research. *Methodologies for Metabolomics: Experimental Strategies and Techniques*, (N. Lutz,

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Presentations made during: (2013-2014)

American Diabetes Association 73rd Scientific Sessions (ADA), Chicago, IL on June 24, 2013 – *“Mitochondrial Phospholipase A2gamma Regulates Lipid Signaling and Insulin Action”*.

Gordon Conference on Lipids, Molecular & Cellular Biology, Waterville Valley, NH on July 22, 2013 – *“The Pleiotropic Roles of the Patatin-like Family of Phospholipases in Cellular Signaling and Bioenergetics Revealed through Lipidomics”*.

Society for Heart and Vascular Metabolism Conference (SHVM), Cambridge, MD on October 1, 2013 – *“Insights into Cardiac Physiology from Lipidomic Analysis”*.

Cardiovascular Research Seminar on April 10, 2014, *“Mitokines, Metabolic Channeling, and Quantum Tunneling in Myocardium”*.

First Year Chemistry Graduate Student Seminar on November 18, 2014, *“Adventures in Shotgun Lipidomics and the Chemical Biology of Mitochondria”*.