

CURRICULUM VITAE

Jon W. Lomasney, M.D.

Department of Pathology
Northwestern University Medical School
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EDUCATION:

1978-1982 B.A., Johns Hopkins University, Baltimore, Maryland
1982-1987 M.D., Dartmouth Medical School, Hanover, New Hampshire

POSTDOCTORAL TRAINING:

Internship and Residencies:

1987 - 1992 Resident, Department of Pathology, Duke University Medical Center
Durham, North Carolina

Research Fellowships:

1979 - 1982 Student Research, Laboratory of Y.C. Lee, Ph.D.
Department of Biochemistry, Johns Hopkins University, Baltimore, Maryland
1984 - 1985 Sarnoff Fellow, Laboratory of Robert J. Lefkowitz, M.D.
Howard Hughes Medical Institute, Duke University Medical Center
Durham, North Carolina
1988 - 1992 Sarnoff Scholar and Research Fellow, Laboratory of Robert J. Lefkowitz,
M.D., Duke University Medical Center, Durham, North Carolina

LICENSURE AND CERTIFICATION:

1992 North Carolina License Registration
1993 Illinois License Registration
1994 American Board of Pathology Certification in Anatomic Pathology

ACADEMIC APPOINTMENTS:

1992 - 1993 Visiting Associate, Department of Anesthesiology
Duke University Medical Center, Durham, North Carolina
1993 - 2002 Assistant Professor, Department of Pathology and Department of Molecular
Pharmacology and Biological Chemistry
Northwestern University Medical School, Chicago, Illinois
2002 - Associate Professor with tenure, Department of Pathology and Department of
Molecular Pharmacology and Biological Chemistry

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HONORS AND AWARDS:

1984	Sarnoff Fellow
1985	American Federation for Clinical Research Medical Student Prize
1988	Sarnoff Scholar
1993 - 1996	Member Scientific Board of Directors, Stanley J. Sarnoff Endowment for
1997 - 1999	Cardiovascular Science
1993 -	Feinberg Scholar
1994 - 1996	Pfizer Scholar in Cardiovascular Medicine
1999 - 2004	Independent Scientist Award (RCDA), NIH
2000- 2001	Searle Teaching Fellow

COMMITTEE ASSIGNMENTS:

Chair Organizing Committee, Chicago Signal Transduction Symposium
Course Director Scientific Basis of Medicine (2nd year M2 curriculum)
Residency Committee, Pathology
Director PSTP
Investment Committee, Northwestern Medical Faculty Foundation

EDITORIAL BOARD MEMBERSHIP

Gene Expression

AD HOC REVIEWER:

Journal of Biological Chemistry
Hypertension
Circulation
Molecular Pharmacology
European Journal of Pharmacology
Biochemistry
PNAS

MEMBERSHIPS, OFFICES, AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

Member, The Society for Neuroscience
Member, Society for Cardiovascular Pathology
Member, American Society for Biochemistry and Molecular Biology
Member, IUPHAR Technical Working Party
Member, American Society for Investigative Pathology

STUDY SECTIONS

1998 - 2002	American Heart Association (Molecular Signaling)
2000 AD HOC	NHLBI SCORs in Thrombosis and Hemostasis
2002 - 2004	American Heart Association (Vascular Biology, Chair 2003)

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RESEARCH FUNDING INFORMATION:

Past

7/94 - 7/96 Pfizer Scholars Program, Molecular Basis for Function of Alpha-1-Adrenergic Receptors, \$130,000.

10/93 - 10/94 NMF, Mutant Receptor and Effector Genes in Cardiovascular Disease, \$20,000.

9/95 - 9/96 NUMS Intramural, Crystal Structure of Native and Mutant Human Phospholipase C Delta 1, \$17,500.

9/96 - 9/97 Lurie Cancer Center Prostate Program, Role of Adrenergic Receptor Signal Transduction in the Development and Progression of Prostate Carcinoma, \$36,411.

9/96 - 9/99 1F31MH11219 Predoctoral NRSA for Paul Bromann, Phospholipid Regulation of Effector Molecules, \$39,024.

9/96 - 9/98 Fellowship for Evan Boetticher, Carcinogenesis Training Grant, \$20,016.

5/98 - 9/99 Beckman Scholars Program, for Eric Mak, \$17,000.

10/99 - 10/2002 Merit Review Award (VA), Regulation and Function of a Novel Phospholipase C, Direct costs \$360,000. Terminated due to overlap with R01 HL63407

5/98 - 4/2002 K01 HL03836 Career Development Award **for Isabel Lopez**, Phospholipase C in Cardiac Disease: Transgenic Models, Direct costs \$373,631. Grant transferred to UIC where Dr. Lopez is now a tenure track faculty member.

2/99 - 1/2004 K02 HL03961 Independent Scientist Development Award, Molecular Basis for Protein-Phospholipid Interaction, Direct costs \$500,000.

7/00 -6/2005 RO1 HL63407, Direct Costs \$600,000
Regulation and Function of a Novel Phospholipase C

Current

5 R01 HL55591 (PI. Lomasney) 4/1/02-3/31/07
NIH/NHLBI Annual Direct costs; \$200,000
Title: Molecular Basis for Protein-Phospholipid Interaction

5 R01 DK064106 (PI. Kanwar) 3/1/03-1/31/07
NIH/NIDDK \$220,000
Title: Pathobiology of HMG-CoA Reductase Inhibitors in Diabetes

1 R01 HL079397 (PI. Haldar, Co-PI. Lomasney) 2/21/05-1/31/09
NIH/NHLB \$303,986
Title: Erythrocyte Raft Signaling in Malarial Infection

1P01HL078826 (PI. Haldar, Co-PI. Lomasney) 7/1/05-6/30/10
NIH/NHLBI \$1,639,138
Program Project Title: Mechanisms of Erythrocytic Infection and Anemia in Malaria

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“Use of Stem Cells and Nanofibers for Treatment of Ischemia” 4/1/06 – 3/31/07
Principal Investigator: Jon W Lomasney M.D.
Agency: Baxter-IBNAM \$50,000

PRINCIPAL CLINICAL AND HOSPITAL SERVICE RESPONSIBILITIES:

1993 Associate Medical Staff, Northwestern Memorial Hospital
Staff Physician, Lakeside VA Medical Center
2003 Director Autopsy Service NMH 2003-present

SELF REPORT OF TEACHING:

Medical School

1994 -- Scientific Basis of Medicine-Pathology
Medical Pharmacology

Graduate School

1994 -- Receptors
Ligands and Signal Transduction
1996 -- Cellular and Molecular Neuroscience
Colloquium on Integrity in Biomedical Research
2000 -- Biochemistry

Dental School

1996 -- 2002 Pathology

Undergraduate

1995 -- 1999 C40 Biological Aspects of Disease

PUBLICATIONS:

Refereed Journals:

1. Leeb-Lundberg, L.M.F., Cotecchia, S., **Lomasney, J.W.**, Debernardis, J.F., Lefkowitz, R.J. and Caron, M.G. Phorbol esters promote α_1 -adrenergic receptor phosphorylation and receptor uncoupling from inositol phospholipid metabolism. Proc. Natl. Acad. Sci., USA, 82:5651, 1985.
2. **Lomasney, J.W.**, Leeb-Lundberg, L.M.F., Cotecchia, S., Regan, J.W., Debernardis, J.F., Caron, M.G. and Lefkowitz, R.J. Mammalian α_1 -adrenergic receptor: Purification and characterization of the native receptor ligand binding subunit. J. Biol. Chem. 261:7710, 1986.
3. Lomasney, L., Bergin, C.J., **Lomasney, J.W.**, Roggli, V. and Foster, W. CT appearance of the Lunate Trachea. J. of Computer Assisted Tomography 13(3):520-522, May/June, 1989.
4. Schwinn, D.A., **Lomasney, J.W.**, Lorenz, W., Szklut, P.J., Fremeau, R.T., Yang-Feng, T.L., Caron, M.G., Lefkowitz, R.J. and Cotecchia, S. Molecular cloning and expression of the cDNA for a novel α_1 -adrenergic receptor subtype. J. Biol. Chem. 265:8183, 1990.

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5. **Lomasney, J.W.**, Lorenz, W., Allen, L.F., King, K., Regan, J.W., Yang-Feng, T.L., Caron, M.G. and Lefkowitz, R.J. Expansion of the α_2 -adrenergic receptor family: Cloning and characterization of a human α_2 -adrenergic receptor subtype, the gene for which is located on chromosome 2. Proc. Natl. Acad. Sci., USA. 87:5094-5098, July 1990.
6. Lorenz, W., **Lomasney, J.W.**, Collins, S., Regan, J.W., Caron, M.G. and Lefkowitz, R.J. Expression of three alpha-2 adrenergic receptor subtypes in rat tissues: Implications for alpha-2 receptor classification. Mol. Pharmacol. 38:599-603, 1990.
7. Cutson, T.M., **Lomasney, J.W.** and Schmader, K.E. Fever of unknown origin in an elderly patient diagnosed at post mortem as Multifocal Angiofollicular Lymph Node Hyperplasia. J. of the Amer. Geriatrics Soc. 38:989-992, 1990.
8. **Lomasney, J.W.**, Cotecchia, S., Lorenz, W., Leung, W., Schwinn, D.A., Yang-Feng, T.L., Brownstein, M., Lefkowitz, R.J. and Caron, M.G. Molecular cloning and expression of the cDNA for the α_{1A} -adrenergic receptor. J. Biol. Chem. 266:6365-6369, 1991.
9. **Lomasney, J.W.**, Cotecchia, S., Lefkowitz, R.J. and Caron, M.G. Molecular biology of alpha-adrenergic receptors: Implications for receptor classification and for structure/function relationships. Biochim. et Biophys. Acta 1095:127-139, 1991.
10. Bylund, D.B., Blaxall, H.S., Iversen, L.J., Caron, M.G., Lefkowitz, R.J. and **Lomasney, J.W.** Pharmacological characteristics of alpha-2 adrenergic receptors: Comparison of pharmacologically defined subtypes with subtypes identified by molecular cloning. Mol. Pharmacol. 42:1-5, 1992.
11. Schwinn, D.A. and **Lomasney, J.W.** Pharmacologic characterization of cloned α_1 -adrenergic receptor subtypes: Selective antagonists suggest the existence of a fourth subtype. Eur. J. Pharmacol. 227:433-6, 1992.
12. Price, D.T., Schwinn, D.A., **Lomasney, J.W.**, Allen, L.F., Caron, M.G. and Lefkowitz, R.J. Identification, quantitation, and localization of mRNA for three distinct alpha-1-adrenergic receptor subtypes in human prostate. J. of Urology. 150 (pt 1):546-551, 1993.
13. Scheinin, M., **Lomasney, J.W.**, Hayden-Hixson, D., Schambra, U.M., Caron, M.G., Lefkowitz, R.J. and Freneau, R.T. Distribution of α_2 -adrenergic receptor subtype gene expression in rat brain. Brain Research. 21:133-149, 1994.
14. Yang-Feng, T.L., Han, H., **Lomasney, J.W.**, and Caron, M.G. Chromosomal localization of the cDNA for an alpha-1-adrenergic receptor subtype. Cytogenetics and Cell Genetics. 66:170-171, 1994.
15. O'Rourke, M.F., Iversen, L.J., **Lomasney, J.W.** and Bylund, D.B. Species orthologues of the alpha-2A adrenergic receptor: Pharmacologic comparisons of the bovine, rat, human and porcine receptors. J. Pharm. and Exp. Therapeutics, 271:735-740, 1994.
16. Jiang, M-J., Chen, C-L., Liu, S-M, Wong, L-P, **Lomasney, J.W.**, and King, K. Cloning and identification of amino acid residues of human phospholipase C $\delta 1$ essential for catalysis. J. Biol. Chem. 270:5495-5505, 1995.
17. DebBurman, S.K., Ptasienski, J., Boetticher, E., **Lomasney, J.W.**, Benovic, J.L., and Hosey, M.M. Lipid-mediated regulation of G protein-coupled receptor kinases 2 and 3. J. Biol. Chem. 270:5742-5747, 1995.
18. **Lomasney, J.W.**, Wang, L-P., Kuan, Y-S., Liu, S-M, Fesik, S.W., and King, K. Phosphatidylinositol-4,5-bisphosphate binding to the pleckstrin homology domain of phospholipase C $\delta 1$ enhances enzyme activity. J. Biol. Chem. 271:25316-25326, 1996.

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19. Sizmann, D., Kuusinen, H., Keranen, S., **Lomasney, J.W.** Lefkowitz, R.J., and Keinanen, K. Production of Adrenergic Receptors in Yeast. Receptors and Channels. 4;197-203, 1996.
20. Bromann, P., Boetticher, E., and **Lomasney, J.W.** A single amino acid substitution in the PH domain of PLC delta 1 increases catalytic activity. J. Biol. Chem. 272; 16240-16246, 1997.
21. **Lomasney, J.W.**, Cheng, H-F, Roffler, S.R. and King, K. Activation of PLC δ 1, by a Ca^{++} -Enzyme-Phosphatidylserine Ternary Complex. J. Biol. Chem. 274; 21995-22001, 1999.
22. Murthy, S.N.P., **Lomasney, J.W.**, Mak, E. and Lorand, L. Binding of G_H /transglutaminase to phospholipase C δ 1 is regulated by GTP. Proc. Nat'l. Acad. Sci., USA 96:21; 11815-11819, 1999.
23. Horvath, K.A., Chiu, E., Maun, D.C., **Lomasney, J.W.**, Greene, R., Pearce, W.H. and Fullerton, D.A. Up-regulation of vascular endothelial growth factor mRNA and angiogenesis after transmyocardial laser revascularization. Ann. Thorac. Surg. 68; 825-829, 1999.
24. Frank, M.W., Mehlman, D.J., Tsai, F., **Lomasney, J.W.**, and Joob, A.W. Syphilitic Aortitis. Circulation 100; 1582-1583, 1999.
25. Fieno, D.S., Raymond, K.J., Chen, E-L, **Lomasney, J.W.**, Klocke, F.J., and Judd, R.M. Contrast enhanced MRI of myocardium at risk: Distinction between reversible and irreversible injury throughout infarct healing. J. of the Amer. Col. of Cardiology. 36;1985-1991, 2000.
26. Lopez, I., Mak, E.C., Ding, J., Hamm, H.E., and **Lomasney, J.W.** A novel phospholipase C that links G alpha 12 to the Ras/MAP kinase pathway. J. Biol. Chem. 276; 2758-2765, 2001.
27. Schmidt, M., Evellin, S., Weermink, P.A.O., vom Dorp, F., Rehmann, H.R., **Lomasney, J.W.**, Jakobs, K.H. A novel phospholipase C/calcium signalling pathway mediated by cyclic AMP and a Rap GTPase. Nature Cell Biology. 3(11): 1020-1024, Nov. 2001.
28. Horvath, K.A., Belkind, N., Wu, I., Greene, R., Doukas, J., **Lomasney, J.W.**, McPherson, D.D., Fullerton, D.A. Functional Comparison of Transmyocardial Revascularization by Mechanical and Laser Means. Ann. Thorac. Surg. 72:1997-2002. 2001.
29. Evellin S, Nolte J, Tysack K, vom Dorp F, Thiel M, Weernink PA, Jakobs KH, Webb EJ, **Lomasney JW**, Schmidt M. Stimulation of phospholipase C-epsilon by the M3 muscarinic acetylcholine receptor mediated by cyclic AMP and the GTPase Rap2B. J Biol Chem 2002 May 10;277(19):16805-13
30. Lin S, Sahai A, Chugh SS, Pan X, Wallner EI, Danesh FR, **Lomasney JW**, Kanwar YS. High glucose stimulates synthesis of fibronectin via a novel protein kinase C, Rap1b and B-Raf signaling. J Biol Chem 2002 Nov 1;277(44):41725-35.
31. Kanwar YS, Pan X, Lin S, Kumar A, Wada J, Haas CS, Liau G, **Lomasney JW**. Imprinted mesodermal specific transcript (MEST) and H19 genes in renal development and diabetes. Kidney Int. 2003 May;63(5):1658-70.
32. Danesh FR, Anel RL, Zeng L, **Lomasney J**, Sahai A, Kanwar YS. Immunomodulatory effects of HMG-CoA reductase inhibitors. Arch Immunol Ther Exp (Warsz). 2003;51(3):139-48.
33. Harrison T, Samuel BU, Akompong T, Hamm H, Mohandas N, **Lomasney JW**, Halda K. ErythrocyteG protein-coupled receptor signaling in malaria infection. Science 2003 Sep;301:1734-1736.

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34. Kanwar YS, Wada J, Lin S, Danesh FR, Chugh SS, Yang Q, Banerjee T, **Lomasney JW**. Links Update of extracellular matrix, its receptors, and cell adhesion molecules in mammalian nephrogenesis. *Am J Physiol Renal Physiol*. 2004 Feb;286(2):F202-15.
35. Minae Kobayashi, R. Kannan Mutharasan, Jianwen Feng, Mary F. Roberts and **Jon W. Lomasney**. Identification of hydrophobic interactions between proteins and lipids: Free fatty acids activate Phospholipase C delta1 via allosterism *Biochemistry* 2004 Jun 15;43(23):7522-33.
36. Kobayashi M, Gryczynski Z, Lukomska J, Feng J, Roberts MF, Lakowiicz JR and **Lomasney JW**. Spectroscopic characterization of the EF-hand domain of phospholipase C delta 1: Identification of a lipid interacting domain. *Archives of Biochem and Biophysics* 2005 Aug 15;440(2):191-203.
37. Murphy SC, Hiller NL, Harrison T, **Lomasney JW**, Mohandas N, Haldar K. Lipid rafts and malaria parasite infection of erythrocytes (Review). *Mol Membr Biol*. 2006 Jan-Feb;23(1):81-8.
38. Murthy SN, Chung PH, Lin L, **Lomasney JW**. Activation of phospholipase C epsilon by free fatty acids and cross talk with phospholipase D and phospholipase A2. *Biochemistry*. 2006 Sep 12;45(36):10987-97.
39. Rajangam K, Behanna HA, Hui MJ, Han X, Hulvat JF, **Lomasney JW**, Stupp SI. Heparin binding nanostructures to promote growth of blood vessels. *Nano Lett*. 2006 Sep;6(9):2086-90.
40. Sean C. Murphy, Travis Harrison, Heidi E. Hamm, **Jon W. Lomasney**, Narla Mohandas and Kasturi Haldar. Erythrocyte G Protein as a Novel Target for Malarial Chemotherapy *PLOS Medicine* in press.

Non Refereed Publications:

1. Caron, M.G., Benovic, J.L., Leeb-Lundberg, L.M.F., Cerione, R.A., Regan, J.W., Cotecchia, S., **Lomasney, J.W.**, Nakata, H., Sibley, D.R., Strasser, R.H., Strulovici, B. and Lefkowitz, R.J. Biochemical pharmacology of the adrenergic receptors: Regulation of responsiveness by phosphorylation of the receptors. In *New Tests for New Drugs*, (S. Garattini, ed.), Wichtig Editore, Milano, Italy. 1985.
2. Caron, M.G., Benovic, J.W., Leeb-Lundberg, L.M.F., Cerione, R.A., Regan, J.W., **Lomasney, J.W.**, Cotecchia, S., Nakata, H., Sibley, D.R., Strasser, R.H. and Lefkowitz, R.J. Responsiveness by phosphorylation of the receptors. In *The Ninth International Symposium on Brain Sciences*. (Tsukata, Y., ed.) Japan Scientific Societies, 1986.
3. **Lomasney, J.W.**, Cotecchia, S., Lorenz, W., Schwinn, D.A., Caron, M.G. and Lefkowitz, R.J. Structure and molecular characterization of α -adrenergic receptors. In *The Pharmacology of Adrenoceptors* (Szabadi, E., ed.) Birkhauser Verlag, 1990.
4. **Lomasney, J.W.**, Allen, L.F. and Lefkowitz, R.J. Cloning and regulation of catecholamine receptor genes. In *Molecular Endocrinology: Basic Concepts and Clinical Correlations*, (Weintraub, B., ed.) Raven Press, 1995.
5. **Lomasney, J.W.** Criteria for the classification of hormone receptors with implications for nomenclature: An impossible task? *Annals of the NY Academy of Science*, Vol. 812, 1997
6. **Lomasney, J.W.** and Allen, L.F. Adrenergic receptors in the cardiovascular system. In

Heart Physiology and Pathophysiology, 4th edition, (Sperelakis, N., ed.) Academic Press, 2000.