January 4, 2009

CURRICULUM VITAE

I. **Name**: **Michael J. Quon**

II. **Present Position**: Chief, Diabetes Unit — 2002 - present

Laboratory of Clinical Investigation, NCCAM
National Institutes of Health
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9 Memorial Drive MSC 0920
Bethesda, MD 20892-0920

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III. **Education and Positions Held**:

	Investigator Hypertension-Endocrine Branch, NHLBI, NIH Bethesda, MD 20892	1995 – 2002
	Senior Clinical Investigator Diabetes Branch, NIDDK, NIH	1993 - 1995
	Clinical Associate (Endocrinology) Diabetes Branch, NIDDK, NIH	1990 - 1993
	Internal Medicine Residency Program University of Chicago Chicago, IL 60637	1988 - 1990
M.D.	Northwestern University Medical School Chicago, IL 60611	1987 - 1988 1982 - 1984
Ph.D.	Biomedical Engineering Northwestern University Graduate School Evanston, IL 60201	1984 - 1987
B.S.	Biomedical Engineering Northwestern University Evanston, IL 60201	1978 - 1982

Harvard University Summer 1977
Cambridge, MA 02138

IV. **Teaching Experience**:

Teaching Fellow 1985 - 1987
Biomedical Engineering Department
Northwestern University

courses in: Neurophysiology, Metabolic Physiology Laboratory,
Renal, GI, and Metabolic Physiology

V. **Honors and Awards**:

Editorial Board, *Journal of the Cardiometabolic Syndrome*	2006 - present
Editorial Board, *Journal of Biological Chemistry*	2005 - 2010
NIH Director's Award for Mentoring	2004
Associate Editor, *Am. J.Physiol.: Endocrinology and Metabolism*	2004 - present
Editorial Advisory Board, *Current Trends in Endocrinology*	2003
American Diabetes Association (Takeda) Minority Mentor Award	2003; 2007
Editorial Board, *Journal of Clinical Endocrinology and Metabolism*	2001 - 2004
Co-Editor-in-Chief, *Current Drug Targets - Immune, Endocrine, and Metabolic Disorders*	2001 - present
American Diabetes Association Mentor Award	2001
Fellow of the American Heart Association	2001
Fellow of the Council for High Blood Pressure Research	1998
Travel Grant, American Diabetes Association 56th Annual Scientific Sessions	1996
Travel Grant, 15th International Diabetes Federation Congress, Kobe, Japan	1994
Symposium on Endocrinology Under 35, Award for best oral presentation	1992
Dean's Alpha Omega Alpha Student Research Award (Northwestern Chapter)	1987
1st place, Sigma Xi 12th Annual Graduate Student Research Symposium (Northwestern Chapter)	1987
Juvenile Diabetes Foundation Medical Student Workshop VI (invited)	1987
General Electric Foundation Award	1986
American Diabetes Association Student Research Award	1986
Walter P. Murphy Fellowship	1984
National Merit Scholar	1978

VI. **Membership in Professional Societies**:

American Association for the Advancement of Science
American Diabetes Association
Council for High Blood Pressure Research, American Heart Association
Endocrine Society
New York Academy of Sciences

VII. **Board Certification and Licensure**:

Diplomate of the National Board of Medical Examiners
July 1, 1989 certificate no. 324135
Diplomate in Internal Medicine
September 21-22, 1993 American Board of Internal Medicine certificate no. 141267
Board Eligible in Endocrinology and Metabolism
State of Maryland medical license no. D40253

VIII. **Grant Support:**

ADA Clinical Research Award: Evaluation of epigallocatechin gallate to simultaneously improve metabolic and cardiovascular actions of insulin in obese, hypertensive, or diabetic subjects
$600,000 July 1, 2008 – June 30, 2011

ADA Research Award: Cross-talk between inflammatory and metabolic signaling pathways involving serine phosphorylation of IRS-1
$300,000 July 1, 2005 - June 30, 2008

Office of Dietary Supplements, NIH Inter-agency Agreement to support clinical research on nutritional supplements and functional foods
$400,000 June 1, 2004 - June 1, 2008

ADA Mentor-based Minority Post-doctoral Fellowship Award
$90,000 July 1, 2003 - June 30, 2005

ADA Research Award: Insulin Signaling Pathways in Vascular Endothelium Related to Activation of Endothelial Nitric Oxide Synthase
$300,000 July 1, 2002 - June 30, 2005

ADA Mentor-based Student Award
$3,000 June 1, 2001 - August 30, 2001

ADA Mentor-based Post-doctoral Fellowship Award
$170,000 July 1, 2001 - June 30, 2005

ADA Research Award: Elucidation of Insulin Signaling Pathways Mediating Production of Nitric Oxide in Vascular Endothelium
$300,000 July 1, 1999 - June 30, 2002

ADA Research Award: Molecular Mechanisms of Insulin-Stimulated Nitric Oxide Production in Vascular Endothelial Cells
$120,615 July 1, 1996 - June 30, 1999

Hoffman-LaRoche, Inc.: Roles of Protein Tyrosine Phosphatases in Insulin-stimulated Glucose Uptake. $35,000 February 1, 1996 - February 1, 1998

ADA Research Award: Molecular Mechanisms of Insulin-Stimulated Glucose Transport: transfection studies in isolated rat adipose cells.
$75,780 July 1, 1994 - June 30, 1996

IX. **Peer Review**:

American Journal of Physiology
Circulation
Diabetes
Diabetes Care
Endocrinology
Journal of Biological Chemistry
Journal of Clinical Endocrinology and Metabolism
Journal of Clinical Investigation
Journal of Theoretical Biology
Molecular and Cellular Biology
Molecular Endocrinology
Nature Genetic

Member, American Diabetes Association Research Grant Review Panel, 1999 - 2007
NIDDK, NIH Research Grants
Department of Veterans Affairs Merit Review Grants
Juvenile Diabetes Foundation International Research Grants

PUBLICATIONS

1. Chen, W.T., Ing, T.S., Daugirdas, J.T., Brescia, D.J., Humayan, H., Gandhi, V.C., Hano, J.E., **Quon, M.J.**: A method of delivering dialysate of constantly decreasing osmolality during dialysis. *Artif. Organs* **3**:377-379, 1979.

2. Ing, T.S., Daugirdas, J.T., Chen, W.T., **Quon, M.J.**, Perry, C.V.: Delivering dialysate of constantly decreasing sodium concentration using an automated dialysate delivery machine. *Int. J. Artif. Organs* **3**:124, 1980.

3. Ing, T.S., **Quon, M.J.**, Daugirdas, J.T., Gandhi, V.C., Epstein, M.B.: Preparation of bicarbonate-containing peritoneal dialysate using an automated dialysate delivery system. *Int. J. Artif. Organs* **4**:148-149, 1981.

4. Ing, T.S., **Quon, M.J.**, Daugirdas, J.T., Liu, P., Gandhi, V.C., Reid, R.R.: "On-line" preparation of bicarbonate-containing dialysate for use in peritoneal dialysis. *Int. J. Artif. Organs* **4**:308-309, 1981.

5. Ing, T.S., Gandhi, V.C., Daugirdas, J.T., Hunt, J., **Quon, M.J.**, Popli, S: Peritoneal dialysis using bicarbonate-containing dialysate produced by automated dialysate delivery machine: acute studies in man. *Artif. Organs* **6**:67-69, 1982.

6. **Quon, M.J.**: A mathematical modeling and computer simulation approach to the study of insulin mediated glucose uptake. Ph.D. Dissertation, Northwestern University, 1987.

7. **Quon, M.J.**, Campfield, L.A.: A mathematical modeling and computer simulation study of insulin receptor regulation. *J. Theor. Biol.* **150**:59-72, 1991.

8. **Quon, M.J.**, Campfield, L.A.: A mathematical modeling and computer simulation study of insulin sensitive glucose transporter regulation. *J. Theor. Biol.* **150**:93-107, 1991.

9. Cama, A., **Quon, M.J.**, Sierra, M.L., Taylor, S.I.: Substitution of isoleucine for methionine at position 1153 in the ß-subunit of the human insulin receptor: a mutation that impairs receptor tyrosine kinase activity, receptor endocytosis, and insulin action. *J. Biol. Chem.* **267**:8383-8389, 1992.

10. Taylor, S.I., Cama, A., Accili, D., Barbetti, F., **Quon, M.J.**, Sierra, M.L., Suzuki, Y., Koller, E., Levy-Toledano, R., Wertheimer, E., Moncada, V.Y., Kadowaki, H., Kadowaki, T.: Mutations in the insulin receptor gene. *Endocrine Rev.* **13**:566-595, 1992.

11. **Quon, M.J.**, Cama, A., Taylor, S.I.: Post-binding characterization of five naturally occurring mutations in the human insulin receptor gene: impaired insulin-stimulated c-jun expression and thymidine incorporation despite normal autophosphorylation. *Biochemistry* **31**:9947-9954, 1992.

12. Taylor, S.I., Accili, D., Cama, A., Koller, E., Levy-Toledano, R., **Quon, M.J.**, Sierra, M.L., Wertheimer, E.: Mutations in the insulin receptor gene in insulin resistant patients. In: Proceedings of the Ninth International Congress of Endocrinology, 1992.

13. Cama, A., Sierra, M.L., **Quon, M.J.**, Ottini, L., Gorden, P., Taylor, S.I.: Substitution of glutamic acid for alanine-1135 in the putative "catalytic loop" of the tyrosine kinase domain of the human insulin receptor: a mutation that impairs proteolytic processing into subunits and inhibits receptor tyrosine kinase activity. *J. Biol. Chem.* **268**:8060-8069, 1993.

14. **Quon, M.J.**, Cama, A., Taylor, S.I.: Five mutations in the human insulin receptor gene: effects on insulin-stimulated c-jun induction and thymidine incorporation. In: *New Perspectives in Endocrinology, Serono Symposia Publications Vol. 99* (A. DeBellis, K.B. Marschke, eds.) Raven Press, NY, pp. 359-368, 1993.

15. **Quon, M.J.**, Zarnowski, M.J., Guerre-Millo, M., Sierra, M.L., Taylor, S.I., Cushman, S.W.: Transfection of DNA into isolated rat adipose cells by electroporation: evaluation of promoter activity in transfected adipose cells which are highly responsive to insulin after one day in culture. *Biochem. Biophys. Res. Commun.* **194**:338-346, 1993.

16. Satoh, S., Nishimura, H., Clark, A.E., Kozka, I.J., Vannucci, S.J., Simpson, I.A., **Quon, M.J.**, Cushman, S.W., Holman, G.D.: Use of bismannose photolabel to elucidate insulin-regulated GLUT4 subcellular trafficking kinetics in rat adipose cells: evidence that exocytosis is a critical site of hormone action. *J. Biol. Chem.* **268**:17820-17829, 1993.

17. **Quon, M.J.**: Advances in kinetic analysis of insulin stimulated GLUT4 translocation in adipose cells. *Am. J. Physiol.* **266**:E144-E150, 1994.

18. Taylor, S.I., Accili, D., Haft, C.R., Hone, J., Imai, Y., Levy-Toledano, R., **Quon, M.J.**, Suzuki, Y., Wertheimer, E.: Mechanisms of hormone resistance: lessons from insulin-resistant patients. *Acta Paediatr*. **83** (suppl 399):95-104, 1994.

19. **Quon, M.J.**, Guerre-Millo, M., Zarnowski, M.J., Butte, A.J., Em, M., Cushman, S.W., Taylor, S.I.: Tyrosine-kinase deficient mutant human insulin receptors (Met^{1153} --> Ile) overexpressed in transfected rat adipose cells fail to mediate translocation of epitope-tagged GLUT4. *Proc. Natl. Acad. Sci. U.S.A.* **91**:5587-5591, 1994.

20. **Quon, M.J.**, Cochran, C., Taylor, S.I., Eastman, R.C.: Non-insulin mediated glucose disappearance in subjects with insulin-dependent diabetes mellitus: discordance between experimental results and minimal model analysis. *Diabetes* **43**:890-896, 1994.

21. Taylor, S.I., Wertheimer, E., Accili, D., Cama, A., Hone, J., Roach, P., **Quon, M.J.**, Suzuki, Y., Levy-Toledano, R., Taouis, M., Sierra, M.L., Barbetti. F., Gorden, P.: Mutations in the insulin receptor gene: Update 1994. In: *Endocrine Reviews Monographs 2. The Endocrine Pancreas, Insulin Action, and Diabetes* (L.E. Underwood, ed.), Endocrine Society Press, MD, pp. 58-65, 1994.

22. Taylor, S.I., Wertheimer, E., Hone, J., Levy-Toledano, R., **Quon, M.J.**, Barbetti, F., Suzuki, Y., Roach, P., Koller, E., Haft, C.R., Sierra, M.L., Cama, A., Accili, D.: Mutations in the insulin receptor gene in patients with genetic syndromes of extreme insulin resistance. In: *Molecular Biology of Diabetes, Part II* (B. Draznin, D. LeRoith, eds.), Humana Press Inc., NJ, pp. 1-23, 1994.

23. **Quon, M.J.**, Butte, A.J., Zarnowski, M.J., Sesti, G., Cushman, S.W., Taylor, S.I.: Insulin receptor substrate 1 (IRS-1) mediates the stimulatory effect of insulin on GLUT4 translocation in transfected rat adipose cells. *J. Biol. Chem*. **269**:27920-27924, 1994.

24. **Quon, M.J.**, Butte, A.J., Taylor, S.I.: Insulin signal transduction pathways. *Trends Endocrin. Met*. **5**:369-376, 1994.

25. **Quon, M.J.**, Cochran, C., Taylor, S.I., Eastman, R.C.: Direct comparison of standard and insulin modified protocols for minimal model estimation of insulin sensitivity in normal subjects. *Diabetes Res. Clin. Ex.* **25**:139-149, 1994.

26. Cama, A., Sierra, M.L., Kadowaki, T., Kadowaki, H., **Quon, M.J.**, Rüdiger, H.W., Dreyer, M., Taylor, S.I.: Two mutant alleles of the insulin receptor gene in a family with a genetic form of insulin resistance: a 10 base pair deletion in exon 1 and a mutation substituting serine for asparagine-462. *Hum. Genet.* **95**:174-182, 1995.

27. **Quon, M.J.**, Chen, H., Ing, B.L., Liu, M., Zarnowski, M.J., Yonezawa, K., Kasuga, M., Cushman, S.W., Taylor, S.I.: Roles of 1-phosphatidylinositol 3-kinase and ras in regulating the translocation of GLUT4 in transfected rat adipose cells. *Mol. Cell. Biol.* **15**:5403-5411, 1995.

28. He, Y., Chen, H., **Quon, M.J.**, Reitman, M.: The mouse *obese* gene: genomic organization, promoter activity, and activation by C/EBPα. *J. Biol. Chem*. **270**:28887-28891, 1995.

29. Ing, B.L., Chen, H., Robinson, K.A., Buse, M.G., **Quon, M.J.**: Characterization of a mutant GLUT4 lacking the N-glycosylation site: studies in transfected rat adipose cells. *Biochem. Biophys. Res. Commun.* **218**:76-82, 1996.

30. Zeng, G., **Quon, M.J.**: Insulin-stimulated production of nitric oxide is inhibited by wortmannin: direct measurement in vascular endothelial cells. *J. Clin. Invest*. **98**:894-898, 1996. (Rapid Publication).

31. **Quon, M.J.**, Chen, H., Lin, C.H., Zhou, L., Ing, B.L., Zarnowski, M.J., Klinghoffer, R., Kazlauskas, A., Cushman, S.W., Taylor, S.I.: Effects of overexpressing wild-type and mutant PDGF receptors on translocation of GLUT4 in transfected rat adipose cells. *Biochem. Biophys. Res. Commun.* **226**:587-594, 1996.

32. Chen, H., Wertheimer, S.J., Lin, C.H., Katz S.L., Amrein, K.E., Burn, P., **Quon, M.J.**: Protein tyrosine phosphatases PTP1B and Syp are modulators of insulin-stimulated translocation of GLUT4 in transfected rat adipose cells. *J. Biol. Chem*. **272**:8026-8031, 1997.

33. Zhou, L., Chen, H., Lin, C.H., Cong, L., McGibbon, M.A., Sciacchitano, S., Lesniak, M.A., **Quon, M.J.**, Taylor, S.I.: Insulin receptor substrate-2 (IRS-2) can mediate the action of insulin to stimulate translocation of GLUT4 to the cell surface in rat adipose cells. *J. Biol. Chem*. **272**:29829-29833, 1997.

34. Chen, H., Ing, B.L., Robinson, K.A., Feagin, A., Buse, M.G., **Quon, M.J.**: Overexpression of glutamine:fructose-6-phosphate amidotransferase (GFAT) in rat adipose cells does not alter recruitment of GLUT4 by acute insulin treatment. *Mol. Cell. Endocrinol*. **135**:67-77, 1997.

35. Cong, L. Chen, H., Li, Y., Zhou, L., McGibbon, M.A., Taylor, S.I., **Quon, M.J.**: Physiological role for Akt in insulin-stimulated translocation of GLUT4 in transfected rat adipose cells. *Mol. Endocrinol*. **11**:1881-1890, 1997.

36. Mason, M.M., He, Y., Chen, H., **Quon, M.J.**, Reitman, M.: Regulation of leptin promoter by Sp1, C/EBP, and a novel factor. *Endocrinology* **139**:1013-1022, 1998.

37. **Quon, M.J.**: Transfection of rat adipose cells by electroporation. In: *DNA Transfer to Cultured Cells: Culture of Specialised Cells Vol. 4* (K. Ravid, R.I. Freshney, eds.), Wiley-Liss, Inc., NY, pp. 93-109, 1998.

38. Chen, H., Srinivas, P.R., Cong, L., Li, Y., Grunberger, G., **Quon, M.J.**: α_2-HSG inhibits insulin-stimulated Elk-1 phosphorylation but not glucose transport in rat adipose cells. *Endocrinology* **139**:4147-4154, 1998.

39. Cardillo, C., Kilcoyne, C.M., Nambi, S.S., Quyyumi, A.A., Cannon, R.O., **Quon, M.J.**, Panza, J.A.: Nitric oxide-dependent vasodilator response to systemic but not to local hyperinsulinemia in the human forearm. *Hypertension* **32**:740-745, 1998.

40. Cobelli, C., Bettini, F., Caumo, A., **Quon, M.J.**: Overestimation of minimal model glucose effectiveness in presence of insulin response is caused by undermodeling. *Am. J. Physiol*. **275**: E1031-E1036, 1998.

41. Chen, H., Cong, L., Li, Y., Yao, Z., Zhang, Z., Burke, T.R.Jr., **Quon, M.J.**: A phosphotyrosyl mimetic peptide reverses impairment of insulin-stimulated translocation of GLUT4 caused by overexpression of PTP1B in rat adipose cells. *Biochemistry* **38**:384-389, 1999.

42. Cong, L., Chen, H., Li, Y., Lin, C.H., Sap, J., **Quon, M.J.**: Overexpression of protein tyrosine phosphatase-α (PTP-α) but not PTP-κ inhibits insulin-stimulated translocation of GLUT4 in rat adipose cells. *Biochem. Biophys. Res. Commun.* **255**:200-207, 1999.

43. Zhou, L., Chen, H., Xu, P., Cong, L., Sciacchitano, S., Li, Y., Graham, D., Jacobs, A.R., Taylor, S.I., **Quon, M.J.**: Action of insulin receptor substrate-3 (IRS-3) and IRS-4 to stimulate translocation of GLUT4 in rat adipose cells. *Mol. Endocrinol*. **13**:505-514, 1999.

44. Baron, A.D., **Quon, M.J.**: Insulin action and endothelial function. In: *Contemporary Endocrinology: Insulin Resistance: The Metabolic Syndrome X* (G.M. Reaven, A. Laws, eds.), Humana Press Inc., NJ, pp. 247-263, 1999.

45. Standaert, M.L., Bandyopadhyay, G., Sajan, M.P., Cong, L., **Quon, M.J.**, Farese, R.V.: Okadaic acid activates atypical PKCs (ζ/λ) in rat and 3T3-L1 adipocytes: an apparent requirement for activation of GLUT4 translocation and glucose transport. *J. Biol. Chem*. **274**:14074-14078, 1999.

46. Nystrom, F., **Quon, M.J.**: Insulin signaling: metabolic pathways and mechanisms for specificty. *Cell. Signal*. **11**:563-574, 1999.

47. Stickle, D.F., Reynolds, M.A., Morris, M.D., **Quon, M.J.**: Dynamic changes in plasma proinsulin/insulin ratio during insulin secretion influence correlation between RIA and IMX measurements of insulin. *Clin. Chim. Acta* **284**:1-13, 1999.

48. Cardillo, C., Nambi, S.S., Kilcoyne, C.M., Choucair, W., Katz, A., **Quon, M.J.**, Panza, J.A.: Insulin stimulates both endothelin and nitric oxide activity in the human forearm. *Circulation* **100**:820-825, 1999.

49. Paz, K., Liu, Y.F., Shorer, H., Hemi, R., LeRoith, D., **Quon, M.J.**, Kanety, H., Seger, R., Zick, Y.: Phosphorylation of insulin receptor substrate-1 (IRS-1) by PKB positively regulates IRS-1 function. *J. Biol. Chem*. **274**:28816-28822, 1999.

50. Bandyopadhyay, G., Standaert, M.L., Sajan, M.P., Cong, L., **Quon, M.J.**, Farese, R.V.: Dependence of insulin-stimulated GLUT4 translocation on 3-phosphoinositide dependent protein kinase-1 and its target threonine-410 in the activation loop of protein kinase C-ζ. *Mol. Endocrinol*. **13**:1776-1772, 1999.

51. Sajan, M.P., Standaert, M.L., Bandyopadhyay, G., **Quon, M.J.**, Burke, T.R.Jr., Farese, R.V.: Protein kinase C-ζ and phosphoinositide-dependent protein kinase-1 are required for insulin-induced activation of ERK in rat adipocytes. *J. Biol. Chem*. **274**:30495-30500, 1999.

52. Nystrom, F.H., Chen, H., Cong, L., Li, Y., **Quon, M.J.**: Caveolin-1 interacts with the insulin receptor and can differentially modulate insulin signaling in Cos-7 cells and rat adipose cells. *Mol. Endocrinol*. **13**:2013-2024, 1999.

53. Zhao, W., Chen, H., Xu, H., Moore, E., Meiri, N., **Quon, M.J.**, Alkon, D.L.: Brain insulin receptors and spatial memory: correlated changes in gene expression, tyrosine phosphorylation, and signaling molecules in the hippocampus of water maze trained rats. *J. Biol. Chem*. **274**:34893-34902, 1999.

54. Yu, S., Gavrilova, O., Chen, H., Lee, R., Liu, J., Pacak, K., Parlow, A.F., Goldstein, D., **Quon, M.J.**, Reitman, M.L., Weinstein, L.S.: Paternal versus maternal transmission of a $G_{s\alpha}$ knockout produces opposite effects on energy metabolism. *J. Clin. Invest*. **105**:615-623, 2000.

55. **Quon, M.J.**, Taylor, S.I.: Insulin action: molecular mechanisms and determinants of specificity. In: *Gene Engineering in Endocrinology* (M.A. Shupnik, ed.), Humana Press, NJ, pp. 17-38, 2000.

56. Zeng, G., Nystrom, F.H., Ravichandran, L.V., Cong, L., Kirby, M., Mostowski, H., **Quon, M.J.**: Roles for insulin receptor, PI 3-kinase, and Akt in insulin signaling pathways related to production of nitric oxide in human vascular endothelial cells. *Circulation* **101**:1539-1545, 2000.

57. Ahmad, F., Cong, L., Holst, L.S., Wang, L., Landstrom, T.R., Pierce, J.H., **Quon, M.J.**, Degerman, E., Manganiello, V.C.: Cyclic nucleotide phosphodiesterase 3B is a downstream target of protein kinase B and may be involved in regulation of effects of protein kinase B on thymidine incorporation in FDCP2 cells. *J. Immunol*. **164**:4678-4688, 2000.

58. Katz, A., Nambi, S., Mather, K., Baron, A.D., Follman, D.A., Sullivan, G., **Quon, M.J.**: Quantitative insulin-sensitivity check index (QUICKI): a simple, accurate method for assessing insulin sensitivity in vivo. *J. Clin. Endocrinol. Metab*. **85**:2402-2410, 2000.

59. Wanant, S., **Quon, M.J.**: Insulin receptor binding kinetics: mathematical modeling and computer simulation studies. *J. Theor. Biol*. **205**:355-364, 2000.

60. Montagnani, M., **Quon, M.J.**: Insulin action in vascular endothelium: potential mechanisms linking insulin resistance with hypertension. *Diabetes Obes. Metab*. **2**:285-292, 2000.

61. Bandyopadhyay, G., Sajan, M.P., Kanoh, Y., Standaert, M.L., Burke, T.R.Jr., **Quon, M.J.**, Reed, B.C., Dikic, I., Noel, L.E., Newgard, C.B., Farese, R.V.: Glucose activates mitogen-activated protein kinase (extracellular signal-related kinase) through proline-rich tyrosine kinase-2 and the GLUT1 glucose transporter. *J. Biol. Chem.* **275**:40817-40826, 2000.

62. **Quon, M.J.**: Insulin action in vascular endothelium. In: *Frontiers in Animal Diabetes Research, Insulin Signaling: From Cultured Cells to Animal Models* (G. Grunberger, Y. Zick, eds.), Taylor & Francis Inc., NY, pp. 207-217, 2001.

63. Ravichandran, L.V., Esposito, D.L., Chen. J., **Quon, M.J.**: Protein kinase C-ζ phosphorylates insulin receptor substrate-1 and impairs its ability to activate phosphatidylinositol 3-kinase in response to insulin. *J. Biol. Chem.* **276**:3543-3549, 2001.

64. Esposito, D.L., Li, Y., Cama, A., **Quon M.J.**: Tyr^{612} and Tyr^{632} in human insulin receptor substrate-1 are important for full activation of insulin-stimulated phosphatidylinositol 3-kinase activity and translocation of GLUT4 in rat adipose cells. *Endocrinology* **142**:2833-2840, 2001.

65. Montagnani, M., Chen, H., Barr, V.A., **Quon, M.J.**: Insulin-stimulated activation of eNOS is independent of Ca^{++} but requires phosphorylation by Akt at Ser^{1179}. *J. Biol. Chem*. **276**:30392-30398, 2001.

66. Bandyopadhyay, G., Sajan, M.P., Kanoh, Y., Standaert, M.L., **Quon, M.J.**, Reed, B.C., Dikic, I., Farese, R.V.: Glucose activates protein kinase C-ζ/λ through proline-rich tyrosine kinase-2, extracellular signal-regulated kinase and phospholipase D: a novel mechanism for activating glucose transporter translocation. *J. Biol. Chem*. **276**:35537-35545, 2001.

67. Chen, H., Nystrom, F.H., Dong, L., Li, Y., Song, S., Liu, F., **Quon, M.J.**: Insulin stimulates increased catalytic activity of phosphoinositide dependent kinase-1 by a phosphorylation dependent mechanism. *Biochemistry* **40**:11851-11859, 2001.

68. Ravichandran, L.V., Chen, H., Li, Y., **Quon, M.J.**: Phosphorylation of PTP1B at Ser^{50} by Akt impairs its ability to dephosphorylate the insulin receptor. *Mol. Endocrinol*. **15**:1768-1780, 2001.

69. **Quon, M.J.**: Limitations of the fasting glucose to insulin ratio as an index of insulin sensitivity. *J Clin. Endocrinol. Metab*. **86**:4615-1617, 2001.

70. Mosser, V.A., Li, Y., **Quon, M.J.**: PTEN does not modulate GLUT4 translocation in rat adipose cells under physiological conditions. *Biochem. Biophys. Res. Commun.* **288**:1011-1017, 2001.

71. Mather, K.J., Hunt, A.E., Steinberg, H.O., Paradisi, G., Hook, G., Katz, A., **Quon, M.J.**, Baron, A.D.: Repeatability characteristics of simple indices of insulin resistance: implications for research applications. *J. Clin. Endocrinol. Metab*. **86**:5457-5464, 2001.

72. Montagnani, M., Golovchenko, I., Kim, I., Koh, G.Y., Goalstone, M., Kucik, D., **Quon, M.J.**, Draznin, B.: Inhibition of phosphatidylinositol 3-kinase enhances mitogenic actions of insulin in vascular endothelial cells. *J. Biol. Chem*. **277**:1794-1799, 2002.

73. **Quon, M.J.**: QUICKI is a useful and accurate index of insulin sensitivity. *J. Clin. Endocrinol. Metab*. **87**:949-950, 2002.

74. Bandyopadhyay, G., Sajan, M.P., Standaert, M.L., **Quon, M.J.**, Lea-Currie, R., Sen, A., Farese, R.V.: Protein kinase C-ζ mediates insulin effects on glucose transport in cultured pre-adipocytes derived from human adipocytes. *J. Clin. Endocrinol. Metab*. **87**:716-723, 2002.

75. Sajan, M.P., Bandyopadhyay, G., Kanoh, Y., Standaert, M.L., **Quon, M.J.**, Reed, B.C., Dikic, I., Farese, R.V.: Sorbitol activates atypical protein kinase C and GLUT4 glucose transporter translocation/glucose transport through proline-rich tyrosine kinase-2, the extracellular signal-regulated kinase pathway and phospholipase D. *Biochem. J.* **362**:665-674, 2002.

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175. Potenza, M.A., Gagliardi, S., De Benedictis, L., Zigrino, A., Tiravanti, E., Colantuono, G., Federici, A., Lorusso, L., Benagiano, V., **Quon, M.J.**, Montagnani, M.: Treatment of Spontaneously Hypertensive Rats (SHR) with rosiglitazone improves cardiovascular homeostasis by reducing p22phox expression and increasing superoxide dismutase activity in

the vasculature. Manuscript in preparation.

176. Muniyappa, R., Srinivasan, P., Chen, H., Aougab, T., Montagnani, M., Sherman, A., **Quon, M.J**.: Endothelial dysfunction due to pathway-selective impairment of PI 3-kinase-dependent insulin signaling in vascular endothelium: insights from mathematical modeling. Manuscript in preparation.

177. Singal, P., Muniyappa, R. Chisolm, R., Hall, G., **Quon, M.J**., Mather, K.J.: Reducing procedure time for the glucose clamp by accurate prediction of the steady-state glucose infusion rate from initial data. Manuscript in preparation.

178. Montagnani, M., Nacci, C., **Quon, M.J.**: Adiponectin stimulates production of endothelin-1 (ET-1) and nitric oxide (NO) from vascular endothelium using signaling pathways both overlapping and distinct from those used by insulin. Manuscript in preparation.

179. Ver, M.R., Li, Y., Chen, H., Ward, Y., Spinelli, B., Kelly, K., **Quon, M.J.**: Potential role for GEM in insulin-stimulated translocation of GLUT4 in adipose cells. Manuscript in preparation.

INVITED LECTURES

1. Insulin receptor regulation: modeling and simulation studies. Midwest Student Medical Research Forum XIX, Omaha, NE, February 9, 1988.

2. Post-binding studies of five naturally occuring mutations in the human insulin receptor gene: abnormal insulin-stimulated c-jun expression and thymidine incorporation despite normal receptor autophosphorylation. American Society for Clinical Investigation, Baltimore, MD, May 3, 1992.

3. Non-insulin mediated glucose disappearance during the frequently sampled intravenous glucose tolerance test (FSIVGTT) in subjects with insulin dependent diabetes mellitus (IDDM): discordance between experimental results and minimal model analysis. 52nd Annual Meeting and Scientific Sessions of the American Diabetes Association, San Antonio, TX, June 22, 1992.

4. Five mutations in the human insulin receptor gene: effects on insulin-stimulated c-jun expression and thymidine incorporation. 3rd International Symposium on Endocrinology Under 35, Rapallo, Italy, September 9, 1992.

5. IRS-1 mediates insulin-stimulated GLUT4 translocation in transfected rat adipose cells. Mid-Atlantic Diabetes Research Symposium, Bethesda, MD, September 24, 1994.

6. Transfection of rat adipose cells with an antisense ribozyme against IRS-1 decreases the sensitivity of the GLUT4 recruitment response to insulin. 15th International Diabetes Federation Congress, Kobe, Japan, November 10, 1994.

7. Constitutively active ras recruits GLUT4 to the cell surface by an insulin-independent pathway in transfected rat adipose cells. 55th Annual Meeting and Scientific Sessions of the American Diabetes Association, Atlanta, GA, June 11, 1995.

8. Characterization of a glycosylation deficient mutant GLUT4 in transfected rat adipose cells. Mid-Atlantic Diabetes Research Symposium, Bethesda, MD, September 23, 1995.

9. Molecular dissection of insulin signaling pathways involved in GLUT4 translocation in transfected rat adipose cells. Indiana University Symposium on Signal Transduction Pathways in Health and Disease, Indianapolis, IN, November 10, 1995.

10. PDGF-stimulated translocation of GLUT4 in transfected rat adipose cells overexpressing wild-type or mutant PDGF receptors. 56th Annual Meeting and Scientific Sessions of the American Diabetes Association, San Francisco, CA, June 10, 1996.

11. Direct measurement of nitric oxide from endothelial cells in response to insulin. 50th Annual Fall Conference and Scientific Sessions of the Council for High Blood Pressure Research, Chicago, IL, September 19, 1996.

12. Insulin signaling pathways related to production of nitric oxide in vascular endothelium. Symposium on Endothelial Function and Metabolic Regulation at the 57th Annual Meeting and Scientific Sessions of the American Diabetes Association, Boston, MA, June 22, 1997.

13. Roles of insulin receptor tyrosine kinase and PI 3-kinase in insulin-stimulated production of nitric oxide: direct measurement in transfected endothelial cells. Mid-Atlantic Diabetes Research Symposium, Bethesda, MD, September 13, 1997.

14. IRS-3 is a major substrate mediating insulin-stimulated translocation of GLUT4 in rat adipose cells. 7th International Symposium on Insulin Receptors and Insulin Action: molecular and clinical aspects, Jerusalem, Israel, May 18, 1998.

15. Signal transduction pathways that may link insulin resistance with hypertension. Diabetes, Insulin Resistance, and Obesity, satellite symposium of the 7th International Symposium on Insulin Receptors and Insulin Action: molecular and clinical aspects, Jerusalem, Israel, May 21, 1998.

16. Insulin signaling pathways related to production of nitric oxide in vascular endothelium. International Motor City Diabetes Symposium, Detroit, MI, October 16-17, 1998.

17. Insulin-stimulated production of nitric oxide in vascular endothelium. Joint Symposium in Celebration of the Joslin Diabetes Center's 100th Anniversary. Boston, MA, October 25, 1998.

18. Insulin signaling pathways related to production of nitric oxide: link between insulin resistance and hypertension? 46th Annual Gerald Friedman Scientific Symposium: Mechanisms involved in the syndrome of insulin resistance. New York, NY, November 1, 1998.

19. Mathematical modeling of insulin action and in vivo estimates of insulin sensitivity. Workshop on Endocrinology: Mechanisms of Hormone Secretion and Control, Mathematics in Biology Program of the Institute for Mathematics and its Applications, Minneapolis, MN, February 17, 1999.

20. Insulin signaling in endothelium related to production of nitric oxide: coupling of insulin resistance with hypertension? Symposium on Microvascular and Macrovascular Complications of Diabetes at the 59th Annual Meeting and Scientific Sessions of the American Diabetes Association, San Diego, CA, June 20, 1999.

21. Insulin-stimulated activation of PDK-1. FASEB Summer Conference on Glucose Transporter Biology, Snowmass, CO, July 21, 1999.

22. Molecular mechanisms of insulin action related to glucose transport. International Huaxia Congress of Endocrinology, Beijing, China, October 18, 1999.

23. Insulin signaling in endothelium related to production of nitric oxide: potential mechanisms linking insulin resistance with hypertension. Clinical Center Grand Rounds, National Institutes of Health, Bethesda, MD, May 3, 2000.

24. Insulin signaling in vascular endothelium. 2nd International Workshop on Insulin Resistance, San Diego, CA, February 13, 2002.

25. Insulin signaling pathways regulating production of nitric oxide in vascular endothelium. Symposium on Blood Flow, Insulin Action and Insulin Resistance at the 62nd Annual Meeting and Scientific Sessions of the American Diabetes Association, San Francisco, CA, June 15, 2002.

26. Insulin signaling and the link to endothelial dysfunction. American College of Endocrinology Insulin Resistance Syndrome Conference, Washington, D.C., August 25, 2002.

27. Insulin signaling pathways regulating production of nitric oxide in vascular endothelium. Korean Society of Lipidology and Atherosclerosis Annual Fall Conference, Seoul, Korea, September 7, 2002.

28. Insulin signaling in vascular endothelium regulating production of nitric oxide. Symposium on Molecular Mechanisms of Insulin Signal Transduction at the 46th Annual Meeting of the Japan Diabetes Society, Toyama, Japan, May 22, 2003.

29. Insulin resistance and atherosclerosis: insights from cell signaling and QUICKI. Symposium on Insulin Resistance and Atherosclerosis at the 46th Annual Meeting of the Japan Diabetes Society, Toyama, Japan, May 22, 2003.

30. Insulin signaling in endothelium related to production of nitric oxide: potential mechanisms linking insulin resistance with hypertension. Workshop on the Insulin Resistance Syndrome and the Pathophysiology of Hypertension, Cardiovascular, and Renal Disease, 57th Annual Fall Conference of the Council for High Blood Pressure Research of the American Heart Association, Washington, D.C., September 23, 2003.

31. Vascular actions of insulin. 3rd International Huaxia Congress of Endocrinology, Shanghai, China, May 24 - 28, 2004.

32. Overview, the NCCAM perspective on diabetes. Symposium on Complementary and Alternative Therapies for Diabetes at 64th Annual Meeting and Scientific Sessions of the American Diabetes Association, Orlando, FL, June 4, 2004.

33. Inflammation and vascular flow. Symposium on Mechanisms of Vascular Wall Damage at the 64th Annual Meeting and Scientific Sessions of the American Diabetes Association, Orlando, FL, June 6, 2004.

34. Mathematical modeling of metabolic insulin signaling pathways. IBC's Implementing Systems Biology, Boston, MA September 21, 2004.

35. Vascular actions of insulin and adiponectin to regulate production of NO in endothelium. Toronto Endocrine Summit: Pathophysiology and Treatment of Diabetes Complications, Toronto, Canada, November 17 - 19, 2004.

36. Vascular actions of insulin regulating production of NO. NIH Symposium on The Role of Insulin in the Critically Ill Patient: Basic and Clinical Evidence, Bethesda, MD, December 9, 2004.

37. Insulin resistance and vascular complications of diabetes: from cells to humans. Keynote Address, American Diabetes Association Washington DC Affiliate Annual Meeting, January 13, 2005.

38. Vascular actions of insulin and adiponectin. Gachon International Symposium for Atherosclerosis, Hypertension, and Stem Cells, Incheon, Korea, May 14, 2005.

39. Vascular actions of insulin and adiponectin. 2nd International Conference on The Molecular Basis of Metabolic Regulation, Bari, Italy, June 24-25, 2005.

40. Endocrine Grand Rounds, University of Utah, September 22, 2005

41. Medicine Grand Rounds, University of Missouri, Coumbia, MO, October 13, 2005

42. Insulin resistance and vascular complications of diabetes: from cells to humans. Symposium on Molecular and Physiological Mechanisms Underlying Vascular Complications of Diabetes. Catholic University of Chile, Santiago, Chile, January 9, 2006.

43. Reciprocal relationships between insulin resistance and endothelial dysfunction in the metabolic syndrome: insights from therapeutic interventions. 1st International Xiangya Diabetes and Immunology Symposium, Changsha, China, April 28 - May 3, 2006.

44. Endocrine Grand Rounds, Mt. Sinai School of Medicine, New York, NY, May 18, 2006.

45. Effects of cocoa flavanols on insulin sensitivity in people with high blood pressure. Workshop on Recent Advances in the Vascular Effects of Cocoa Flavanols, Mars Nutrition Research Council, Brussels, Belgium, July 25, 2006.

46. Mathematical modeling of insulin action. CIIT Centers for Health Research Colloquium, Research Triangle Park, NC, July 28, 2006.

47. Mechanisms underlying beneficial effects of green tea polyphenols on metabolic and cardiovascular health. Pennington Scientific Symposium on Botanicals and Cardiometabolic Syndrome, Baton Rouge, LA, October 30, 2006.

48. Update on vascular actions of insulin. Endocrine Grand Rounds, University of Virginia, Charlottesville, VA, December 5, 2006.

49. Novel vascular actions of ghrelin, DHEA, and EGCG that mimic insulin action. Nutritional Biology Seminar Series, Western Human Nutrition Research Center, UC Davis, Januaury 29, 2007.

50. Novel vascular actions of ghrelin, DHEA, and EGCG that mimic insulin action. Endocrine Grand Rounds, Albert Einstein College of Medicine, NY, March 16, 2007

51. Reciprocal relationships between insulin resistance and endothelial dysfunction. 2nd International GO AHEAD Symposium, Seoul, Korea, May 26, 2007.

52. Reciprocal relationships between insulin resistant and endothelial dysfunction. US-Korea Conference on Science Technology and Entrepreneurship, August 10, Reston VA, August 10, 2007.

53. Novel vascular actions of DHEA, and EGCG that mimic insulin action. Mexican Biochemical Society Symposium on Signal Transduction. Vera Cruz Mexico, September 2-6, 2007.

54. Inflammatory markers and the metabolic syndrome. New York Academy of Sciences Symposium on Targeting the Complications of Metabolic Syndrome, Diabetes, and Inflammation, New York, NY, October, 23, 2007.

55. Epigallocatechin gallate, a green tea polyphenol, ameliorates metabolic syndrome abnormalities. Society for Free Radical Biology & Medicine Symposium on Functional and Biological Activities of Natural and Synthetic Antioxidants, Washington, DC, November 14-18, 2007.

56. Effects of EGCG and DHEA to mimic vascular actions of insulin. Institute of Biomedical and Public Health Sciences, Virginia Tech, Blacksburg, VA, December 14, 2007.

57. Reciprocal Relationships Between Insulin Resistance and Endothelial Dysfunction: from cells to humans. USDA, Beltsville Human Nutrition Research Center, Beltsville, MD, March 11, 2008.

58. Novel vascular actions of DHEA and EGCG that mimic insulin action. Vascular Biology Center Research Seminar Series, Medical College of Georgia, Augusta, GA, April 30, 2008.

59. Reciprocal relationships between insulin resistance and endothelial dysfunction. Alumni Keynote Address. Northwestern University Medical Scientist Training Program Student-Faculty Retreat, Chicago, IL, July 26-27, 2008.

60. Reciprocal relationships between insulin resistance and endothelial dysfunction. 34th Autumn Conference of the Korean Diabetes Association, "Complications of Diabetes", Seoul, Korea, October 30 – November 1, 2008

61. Reciprocal relationships between insulin resistance and endothelial dysfunction: from cells to humans. Keystone Symposium on Complication of Diabetes and Obesity, Vancouver, Canada, February 24 – March 1, 2009.

62. Reciprocal relationships between insulin resistance and endothelial dysfunction. 3rd International GO AHEAD Symposium, Seoul, Korea, May 16, 2009.