

March 13, 2002

CURRICULUM VITAE

- I. **Name:** **Michael J. Quon**
- II. **Date of Birth:** April 26, 1960 Oakland, California
- III. **Present Position:** Investigator 1995 - present
Cardiology Branch, NHLBI
National Institutes of Health
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- IV. **Home Address:** 6916 Rannoch Road
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(301) 229-8134
- Married to Huison K. Quon, D.D.S. (June 22, 1985)
- Children: Hana S. Quon (born December 19, 1986)
James H. Quon (born December 15, 1988)
- V. **Education and Positions Held:**
- | | | |
|--------------|---|-------------|
| | Senior Clinical Investigator | 1993 - 1995 |
| | Diabetes Branch, NIDDK, NIH | |
| | Bethesda, MD 20892 | |
| | Clinical Associate (Endocrinology) | 1990 - 1993 |
| | Diabetes Branch, NIDDK, NIH | |
| | Internal Medicine Residency Program | 1988 - 1990 |
| | University of Chicago | |
| | Chicago, IL 60637 | |
| M.D. | Northwestern University Medical School | 1987 - 1988 |
| | Chicago, IL 60611 | 1982 - 1984 |
| Ph.D. | Biomedical Engineering | 1984 - 1987 |
| | Northwestern University Graduate School | |
| | Evanston, IL 60201 | |
| B.S. | Biomedical Engineering | 1978 - 1982 |
| | Northwestern University | |
| | Evanston, IL 60201 | |

Harvard University
Cambridge, MA 02138

Summer 1977

VI. Teaching Experience:

Teaching Fellow
Biomedical Engineering Department
Northwestern University

1985 - 1987

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

Instructor in Immunology
National High School Institute, Northwestern University

Summer 1986

VII. Honors and Awards:

Editorial Board, <i>Journal of Clinical Endocrinology and Metabolism</i>	2001
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

VIII. 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
Juvenile Diabetes Foundation International

IX. 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

X. **Grant Support:**

American Diabetes Association Mentor-based Student Award
\$3,000 June 1, 2001 - August 30, 2001

American Diabetes Association Mentor-based Post-doctoral Fellowship Award
\$140,000 July 1, 2001 - June 30, 2005

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

American Diabetes Association 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.

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

XI. **Peer Review:**

American Journal of Physiology
Diabetes
Diabetes Care
Endocrinology
FEBS Letters
Journal of Biological Chemistry

Journal of Clinical Investigation
Journal of Theoretical Biology
Life Sciences
Metabolism
Molecular and Cellular Biology
Nature Genetics

Member, American Diabetes Association Research Grant Review Panel, 1999 - 2002
Editorial Board, *Journal of Clinical Endocrinology and Metabolism*, 2001 - 2005
Co-editor-in-Chief, *Current Drug Targets - Immune, Endocrine, and Metabolic Disorders*

NIDDK, NIH Research Grants
Department of Veterans Affairs Merit Review Grants
Juvenile Diabetes Foundation International Research Grants
Israel Science Foundation Research Grants
The Wellcome Trust Research Grants

XII. **Consulting:**

Closer Look Creative, Inc.
212 W. Superior Street
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Burrill and Company
120 Montgomery Street
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XIII. **Publications:** (see next page)

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 β -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 (Met¹¹⁵³Ile) 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/EBP". *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.
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-" (PTP-) but not PTP-6 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., Sajjan, M.P., Cong, L., **Quon, M.J.**, Farese, R.V.: Okadaic acid activates atypical PKCs (. /8) 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 specificity. *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-. . *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-. 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" 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- α 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.**: Tyr⁶¹² and Tyr⁶³² 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 Ser¹¹⁷⁹. *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- α 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 Ser⁵⁰ 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**:4615-4617, 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- α 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.
76. LeRoith, D., **Quon, M.J.**, Zick, Y.: Insulin and insulin-like growth factor-1 receptors and signaling pathways: similarities and differences. In: *Hormone Signaling* (V. Goffin, P.A. Kelly, eds.), Kluwer Academic Publishers, Boston, pp., 2002.
77. Armoni, M., **Quon, M.J.**, Esposito, D., Shapiro, D.N., Harel, C., Zipris, D., Karnieli, E.: PAX3/FKHR oncoprotein activates GLUT4 gene expression in vivo and in vitro. *J. Clin. Endocrinol. Metab.* **87**:, 2002, in press.
78. Wick, M.J., Wick, K.R., Chen, H., He, H., Dong, L.Q., **Quon, M.J.**, Liu, F.: Substitution of the autophosphorylation site Thr⁵¹⁶ with a negatively-charged residue confers constitutive activity to mouse PDK-1 in cells. *J. Biol. Chem.* **277**:, 2002, in press.
79. Razzini, G., Maffucci, T., Ingrosso, A., Chen, H., Iacobelli, S., Sciacchitano, S., **Quon, M.J.**, Falasca, M.: Role of pleckstrin homology domain in regulating membrane targeting and metabolic function of insulin receptor substrate-3. *Mol. Endocrinol.*, under revision, 2002.
80. Sedaghat, A.R., **Quon, M.J.**: A mathematical model of metabolic insulin signaling pathways. *Am. J. Physiol.*, under revision, 2002.
81. Montagnani, M., Ravichandran, L.V., Chen, H., Esposito, D.L., **Quon, M.J.**: Insulin-stimulated activation of eNOS requires IRS-1 and PDK-1 to couple signaling from the insulin receptor to PI 3-kinase pathways. *Mol. Endocrinol.*, under revision, 2002.
82. Chen, H., Sullivan, G., Katz, A., **Quon, M.J.**: QUICKI is a useful index of insulin sensitivity in hypertensive subjects. Manuscript submitted.
83. Zhao, W.Q., Chen, G., Chen, H., Pascale, A., Ravindranath, L., **Quon, M.J.**, Alkon, D.L.: Secretion of annexin II via activation of insulin receptor and IGF-1 receptor. Manuscript submitted.

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 occurring 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.