Paul F Pilch

List of Publications by Year
in descending order

104 papers	8,412 citations	41344 49 h-index	45317 90 g-index
107 all docs	107 docs citations	107 times ranked	7772 citing authors

#	Article	IF	Citations
1	Insulin-regulatable tissues express a unique insulin-sensitive glucose transport protein. Nature, 1988, 333, 183-185.	27.8	613
2	Tumor Necrosis Factor-Î±-induced Insulin Resistance in 3T3-L1 Adipocytes Is Accompanied by a Loss of Insulin Receptor Substrate-1 and GLUT4 Expression without a Loss of Insulin Receptor-mediated Signal Transduction. Journal of Biological Chemistry, 1997, 272, 971-976.	3.4	456
3	Region-specific variation in the properties of skeletal adipocytes reveals regulated and constitutive marrow adipose tissues. Nature Communications, 2015, 6, 7808.	12.8	332
4	Deletion of Cavin/PTRF Causes Global Loss of Caveolae, Dyslipidemia, and Glucose Intolerance. Cell Metabolism, 2008, 8, 310-317.	16.2	313
5	Decreased expression of the insulin-responsive glucose transporter in diabetes and fasting. Nature, 1989, 340, 70-72.	27.8	299
6	Stimulation of tyrosine-specific phosphorylation in vitro by insulin-like growth factor I. Nature, 1983, 305, 438-440.	27.8	271
7	Clathrin-independent carriers form a high capacity endocytic sorting system at the leading edge of migrating cells. Journal of Cell Biology, 2010, 190, 675-691.	5.2	263
8	A Critical Role of Cavin (Polymerase I and Transcript Release Factor) in Caveolae Formation and Organization. Journal of Biological Chemistry, 2008, 283, 4314-4322.	3.4	244
9	MURC/Cavin-4 and cavin family members form tissue-specific caveolar complexes. Journal of Cell Biology, 2009, 185, 1259-1273.	5.2	243
10	The .beta. subunit of the insulin receptor kinase is an insulin-activated protein. Biochemistry, 1983, 22, 717-721.	2.5	227
11	Stimulation of Collagen Formation by Insulin and Insulin-Like Growth Factor I in Cultures of Human Lung Fibroblasts*. Endocrinology, 1989, 124, 964-970.	2.8	218
12	Insulin Increases the Association of Akt-2 with Glut4-containing Vesicles. Journal of Biological Chemistry, 1998, 273, 7201-7204.	3.4	204
13	Reconstitution of Insulin-sensitive Glucose Transport in Fibroblasts Requires Expression of Both PPARÎ³ and C/EBPÎ±. Journal of Biological Chemistry, 1999, 274, 7946-7951.	3.4	188
14	Identification and Characterization of an Exercise-sensitive Pool of Glucose Transporters in Skeletal Muscle. Journal of Biological Chemistry, 1995, 270, 27584-27588.	3.4	165
15	Nur77 Coordinately Regulates Expression of Genes Linked to Glucose Metabolism in Skeletal Muscle. Molecular Endocrinology, 2007, 21, 2152-2163.	3.7	149
16	Identification of a protein kinase as an intrinsic component of rat liver coated vesicles. Biochemistry, 1984, 23, 4420-4426.	2.5	144
17	UCP-3 expression in skeletal muscle: effects of exercise, hypoxia, and AMP-activated protein kinase. American Journal of Physiology - Endocrinology and Metabolism, 2000, 279, E622-E629.	3.5	133
18	The caveolinâ€“cavin system plays a conserved and critical role in mechanoprotection of skeletal muscle. Journal of Cell Biology, 2015, 210, 833-849.	5.2	133

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19	Insulin Resistance and Altered Systemic Glucose Metabolism in Mice Lacking Nur77. Diabetes, 2009, 58, 2788-2796.	0.6	132
20	The Expression and Regulation of STATs during 3T3-L1 Adipocyte Differentiation. Journal of Biological Chemistry, 1996, 271, 10441-10444.	3.4	125
21	Dynamics of Signaling during Insulin-stimulated Endocytosis of Its Receptor in Adipocytes. Journal of Biological Chemistry, 1995, 270, 59-65.	3.4	118
22	The Metabolic Regulation and Vesicular Transport of GLUT4, the Major Insulin-Responsive Glucose Transporter*. Endocrine Reviews, 1995, 16, 529-546.	20.1	115
23	Proteomic Analysis of GLUT4 Storage Vesicles Reveals LRP1 to Be an Important Vesicle Component and Target of Insulin Signaling. Journal of Biological Chemistry, 2010, 285, 104-114.	3.4	113
24	Role of PPARÎ³ in Regulating Adipocyte Differentiation and Insulinâ€Responsive Glucose Uptake. Annals of the New York Academy of Sciences, 1999, 892, 134-145.	3.8	107
25	Rapid Flip-flop of Oleic Acid across the Plasma Membrane of Adipocytes. Journal of Biological Chemistry, 2003, 278, 7988-7995.	3.4	107
26	The Interaction of Akt with APPL1 Is Required for Insulin-stimulated Glut4 Translocation. Journal of Biological Chemistry, 2007, 282, 32280-32287.	3.4	107
27	Fat caves: caveolae, lipid trafficking and lipid metabolism in adipocytes. Trends in Endocrinology and Metabolism, 2011, 22, 318-324.	7.1	102
28	Sortilin Is a Major Protein Component of Glut4-containing Vesicles. Journal of Biological Chemistry, 1997, 272, 24145-24147.	3.4	101
29	Isolation of a proteolytically derived domain of the insulin receptor containing the major site of cross-linking/binding. Biochemistry, 1989, 28, 3448-3455.	2.5	92
30	Role of Caveolin-1 and Cholesterol in Transmembrane Fatty Acid Movementâ€. Biochemistry, 2006, 45, 2882-2893.	2.5	89
31	Immunopurification and Characterization of Rat Adipocyte Caveolae Suggest Their Dissociation from Insulin Signaling. Journal of Biological Chemistry, 2003, 278, 18321-18329.	3.4	88
32	Unique cytochalasin B binding characteristics of the hepatic glucose carrier. Biochemistry, 1983, 22, 2222-2227.	2.5	86
33	Critical Proliferation-independent Window for Basic Fibroblast Growth Factor Repression of Myogenesis via the p42/p44 MAPK Signaling Pathway. Journal of Biological Chemistry, 2001, 276, 13709-13717.	3.4	86
34	Dynamics of Protein-tyrosine Phosphatases in Rat Adipocytes. Journal of Biological Chemistry, 2000, 275, 6308-6312.	3.4	81
35	p115 Interacts with the GLUT4 Vesicle Protein, IRAP, and Plays a Critical Role in Insulin-stimulated GLUT4 Translocation. Molecular Biology of the Cell, 2005, 16, 2882-2890.	2.1	81
36	Vanadate Treatment of Streptozotocin Diabetic Rats Restores Expression of the Insulin-Responsive Glucose Transporter in Skeletal Muscle. Endocrinology, 1990, 126, 2728-2732.	2.8	79

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37	The Sugar Is sIRVed: Sorting Glut4 and Its Fellow Travelers. Traffic, 2011, 12, 665-671.	2.7	77
38	The insulin receptor: structural features. Trends in Biochemical Sciences, 1981, 6, 222-225.	7.5	73
39	Effect of Thyroid Status on Insulin Action in Rat Adipocytes and Skeletal Muscle. Journal of Clinical Investigation, 1980, 66, 574-582.	8.2	73
40	IDOL Stimulates Clathrin-Independent Endocytosis and Multivesicular Body-Mediated Lysosomal Degradation of the Low-Density Lipoprotein Receptor. Molecular and Cellular Biology, 2013, 33, 1503-1514.	2.3	68
41	The Formation of an Insulin-responsive Vesicular Cargo Compartment Is an Early Event in 3T3-L1 Adipocyte Differentiation. Molecular Biology of the Cell, 1999, 10, 1581-1594.	2.1	67
42	Multiple endosomal recycling pathways in rat adipose cells. Biochemical Journal, 1998, 331, 829-835.	3.7	63
43	Cellular spelunking: exploring adipocyte caveolae. Journal of Lipid Research, 2007, 48, 2103-2111.	4.2	60
44	Cholesterol Depletion in Adipocytes Causes Caveolae Collapse Concomitant with Proteosomal Degradation of Cavin-2 in a Switch-Like Fashion. PLoS ONE, 2012, 7, e34516.	2.5	58
45	Caveolin-1 Is Necessary for Hepatic Oxidative Lipid Metabolism: Evidence for Crosstalk between Caveolin-1 and Bile Acid Signaling. Cell Reports, 2013, 4, 238-247.	6.4	56
46	Pleiotropic Effects of Cavin-1 Deficiency on Lipid Metabolism. Journal of Biological Chemistry, 2014, 289, 8473-8483.	3.4	55
47	The Insulin-like Growth Factor II/Mannose 6-Phosphate Receptor Utilizes the Same Membrane Compartments as GLUT4 for Insulin-dependent Trafficking to and from the Rat Adipocyte Cell Surface. Journal of Biological Chemistry, 1996, 271, 21703-21708.	3.4	54
48	C₂C₁₂myocytes lack an insulin-responsive vesicular compartment despite dexamethasone-induced GLUT4 expression. American Journal of Physiology - Endocrinology and Metabolism, 2002, 283, E514-E524.	3.5	54
49	Conformational Changes of the Insulin Receptor upon Insulin Binding and Activation As Monitored by Fluorescence Spectroscopyâ€. Biochemistry, 1997, 36, 2701-2708.	2.5	53
50	Co-Regulation of Cell Polarization and Migration by Caveolar Proteins PTRF/Cavin-1 and Caveolin-1. PLoS ONE, 2012, 7, e43041.	2.5	49
51	PTRF/Cavin-1 promotes efficient ribosomal RNA transcription in response to metabolic challenges. ELife, 2016, 5, .	6.0	48
52	Expression of an insulin-regulatable glucose carrier in muscle and fat endothelial cells. Nature, 1989, 342, 798-800.	27.8	47
53	Dynamics of Lipid Droplet-Associated Proteins during Hormonally Stimulated Lipolysis in Engineered Adipocytes: Stabilization and Lipid Droplet Binding of Adipocyte Differentiation-Related Protein/Adipophilin. Molecular Endocrinology, 2006, 20, 459-466.	3.7	47
54	Induction of Akt-2 Correlates with Differentiation in Sol8 Muscle Cells. Biochemical and Biophysical Research Communications, 1998, 251, 835-841.	2.1	46

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55	The Formin Family Protein, Formin Homolog Overexpressed in Spleen, Interacts with the Insulin-Responsive Aminopeptidase and Profilin IIa. Molecular Endocrinology, 2003, 17, 1216-1229.	3.7	45
56	Insulin-dependent protein trafficking in skeletal muscle cells. American Journal of Physiology - Endocrinology and Metabolism, 1998, 275, E187-E196.	3.5	42
57	Glut4 Storage Vesicles without Glut4: Transcriptional Regulation of Insulin-Dependent Vesicular Traffic. Molecular and Cellular Biology, 2004, 24, 7151-7162.	2.3	37
58	Caveolae, Fenestrae and Transendothelial Channels Retain PV1 on the Surface of Endothelial Cells. PLoS ONE, 2012, 7, e32655.	2.5	37
59	Bidirectional regulation of uncoupling protein-3 and GLUT-4 mRNA in skeletal muscle by cold. American Journal of Physiology - Endocrinology and Metabolism, 1998, 275, E386-E391.	3.5	35
60	Autophosphorylation within insulin receptor .beta.-subunits can occur as an intramolecular process. Biochemistry, 1991, 30, 7740-7746.	2.5	34
61	Separation and Partial Characterization of Three Distinct Intracellular GLUT4 Compartments in Rat Adipocytes. Journal of Biological Chemistry, 1999, 274, 37755-37762.	3.4	33
62	Insulin-like growth factor I binding and receptor kinase in red and white muscle. FEBS Letters, 1988, 234, 257-262.	2.8	30
63	Caveolae and lipid trafficking in adipocytes. Clinical Lipidology, 2011, 6, 49-58.	0.4	29
64	Dipeptide metalloendoprotease substrates are glucose transport inhibitors and membrane structure perturbants. Biochemistry, 1986, 25, 3944-3950.	2.5	28
65	Intrinsic kinase activity of the insulin receptor. International Journal of Biochemistry & Cell Biology, 1990, 22, 315-324.	0.5	28
66	Structural Studies of the Detergent-solubilized and Vesicle-reconstituted Insulin Receptor. Journal of Biological Chemistry, 1999, 274, 34981-34992.	3.4	28
67	Pharmacological Targeting of Adipocytes/Fat Metabolism for Treatment of Obesity and Diabetes. Molecular Pharmacology, 2006, 70, 779-785.	2.3	28
68	Role of Insulin-dependent Cortical Fodrin/Spectrin Remodeling in Glucose Transporter 4 Translocation in Rat Adipocytes. Molecular Biology of the Cell, 2006, 17, 4249-4256.	2.1	28
69	Acyl Coenzyme A Synthetase Regulation: Putative Role in Longâ€Chain Acyl Coenzyme A Partitioning. Obesity, 2004, 12, 1781-1788.	4.0	27
70	Separation and characterization of three insulin receptor species that differ in subunit composition. Biochemistry, 1988, 27, 5693-5700.	2.5	25
71	Differential regulation of glucose transporter 1 and 2 mRNA expression by epidermal growth factor and transforming growth factorâ€beta in rat hepatocytes. Journal of Cellular Physiology, 1992, 153, 288-296.	4.1	25
72	Cavin1; a Regulator of Lung Function and Macrophage Phenotype. PLoS ONE, 2013, 8, e62045.	2.5	25

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73	Interaction of suppressor of cytokine signalling 3 with cavin-1 links SOCS3 function and cavin-1 stability. Nature Communications, 2018, 9, 168.	12.8	25
74	Insulin binding changes the interface region between .alpha. subunits of the insulin receptor. Biochemistry, 1989, 28, 2722-2727.	2.5	24
75	Dissociation of Insulin Receptor Expression and Signaling from Caveolin-1 Expression. Journal of Biological Chemistry, 2005, 280, 13483-13486.	3.4	24
76	ERK6 is expressed in a developmentally regulated manner in rodent skeletal muscle. Biochemical and Biophysical Research Communications, 2003, 306, 163-168.	2.1	23
77	Caveolins sequester FA on the cytoplasmic leaflet of the plasma membrane, augment triglyceride formation, and protect cells from lipotoxicity. Journal of Lipid Research, 2010, 51, 914-922.	4.2	23
78	Caveolins/caveolae protect adipocytes from fatty acid-mediated lipotoxicity. Journal of Lipid Research, 2011, 52, 1526-1532.	4.2	21
79	Fluorine-containing analogs of intermediates in the shikimate pathway. Biochemistry, 1976, 15, 5315-5320.	2.5	19
80	Glut4 Is Targeted to Specific Vesicles in Adipocytes of Transgenic Mice Overexpressing Glut4 Selectively in Adipose Tissue. Journal of Biological Chemistry, 1996, 271, 10490-10494.	3.4	19
81	Muscular dystrophy in PTFR/cavin-1 null mice. JCI Insight, 2017, 2, e91023.	5.0	19
82	The ligand binding subunit of the insulin-like growth factor 1 receptor has properties of a peripheral membrane protein. Biochemical and Biophysical Research Communications, 1986, 136, 45-50.	2.1	16
83	Insulin-mediated translocation of GLUT-4-containing vesicles is preserved in denervated muscles. American Journal of Physiology - Endocrinology and Metabolism, 2000, 278, E1019-E1026.	3.5	16
84	Insulin Activation of Mitogen-Activated Protein (MAP) Kinase and Akt Is Phosphatidylinositol 3-Kinase-Dependent in Rat Adipocytes. Biochemical and Biophysical Research Communications, 2000, 274, 845-851.	2.1	16
85	Caveolins sequester FA on the cytoplasmic leaflet of the plasma membrane, augment triglyceride formation, and protect cells from lipotoxicity. Journal of Lipid Research, 2010, 51, 914-922.	4.2	16
86	Cavin-3 Knockout Mice Show that Cavin-3 Is Not Essential for Caveolae Formation, for Maintenance of Body Composition, or for Glucose Tolerance. PLoS ONE, 2014, 9, e102935.	2.5	16
87	Insulin stimulates the tyrosine phosphorylation of a 165 kDa protein that is associated with microsomal membranes of rat adipocytes. Biochimica Et Biophysica Acta - Biomembranes, 1989, 986, 41-46.	2.6	15
88	Modification of the insulin receptor by diethyl pyrocarbonate: effect on insulin binding and action. Biochemistry, 1982, 21, 5638-5644.	2.5	14
89	Regulation of glycogen concentration and glycogen synthase activity in skeletal muscle of insulin-resistant rats. Archives of Biochemistry and Biophysics, 2007, 464, 144-150.	3.0	14
90	Characterization and solubilization of the cytochalasin B binding component from human placental microsomes. Biochimica Et Biophysica Acta - Biomembranes, 1984, 777, 123-132.	2.6	12

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91	Separation of IRS-1 and PI3-Kinase from GLUT4 Vesicles in Rat Skeletal Muscle. Biochemical and Biophysical Research Communications, 1998, 246, 282-286.	2.1	12
92	Cavin-1/PTRF mediates insulin-dependent focal adhesion remodeling and ameliorates high-fat dietâ€“induced inflammatory responses in mice. Journal of Biological Chemistry, 2019, 294, 10544-10552.	3.4	9
93	Insulin secretion and action and diabetes mellitus. Journal of Cellular Biochemistry, 1992, 48, 1-2.	2.6	6
94	GLUT4-containing vesicles in rat adipocytes as a tissue-specific recycling compartment. Seminars in Cell and Developmental Biology, 1996, 7, 269-278.	5.0	6
95	Chromatographic resolution of insulin receptor from insulin-sensitive D-glucose transporter of adipocyte plasma membranes. Biochemistry, 1981, 20, 216-221.	2.5	5
96	Intermolecular Phosphorylation between Insulin Holoreceptors Does Not Stimulate Substrate Kinase Activity. Journal of Biological Chemistry, 1995, 270, 31136-31140.	3.4	5
97	Isolation of GLUT4 Storage Vesicles. Current Protocols in Cell Biology, 2006, 30, Unit 3.20.	2.3	5
98	Adiporedoxin, an upstream regulator of ER oxidative folding and protein secretion in adipocytes. Molecular Metabolism, 2015, 4, 758-770.	6.5	5
99	An AMPK-dependent, non-canonical p53 pathway plays a key role in adipocyte metabolic reprogramming. ELife, 2020, 9, .	6.0	4
100	STRUCTURAL FEATURES OF THE INSULIN EFFECTOR SYSTEM: RELATION TO HEXOSE TRANSPORT ACTIVATION. Annals of the New York Academy of Sciences, 1980, 358, 282-291.	3.8	3
101	Insulin-Dependent Phosphorylation of a 70-kDa Protein in Light Microsomes from Rat Adipocytes. Biochemical and Biophysical Research Communications, 2000, 276, 1302-1305.	2.1	2
102	Insulin Receptor Family. , 2004, , 436-440.		2
103	HEXOSE TRANSPORT IN ADIPOCYTES: STIMULATION BY INSULIN IN THE ABSENCE OF INTACT RECEPTOR. Annals of the New York Academy of Sciences, 1980, 358, 356-356.	3.8	0
104	Cavinâ€1/PTRF as a new substrate of the SOCS3 E3 ubiquitin ligase complex. FASEB Journal, 2013, 27, 782.1.	0.5	0