

Rohit N Kulkarni

List of Publications by Year in descending order

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113
papers

8,638
citations

66234

42
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45213

90
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118
all docs

118
docs citations

118
times ranked

9680
citing authors

#	ARTICLE	IF	CITATIONS
1	Tissue-Specific Knockout of the Insulin Receptor in Pancreatic β Cells Creates an Insulin Secretory Defect Similar to that in Type 2 Diabetes. <i>Cell</i> , 1999, 96, 329-339.	13.5	1,093
2	Loss of Insulin Signaling in Hepatocytes Leads to Severe Insulin Resistance and Progressive Hepatic Dysfunction. <i>Molecular Cell</i> , 2000, 6, 87-97.	4.5	1,077
3	Loss of ARNT/HIF1 α Mediates Altered Gene Expression and Pancreatic-Islet Dysfunction in Human Type 2 Diabetes. <i>Cell</i> , 2005, 122, 337-349.	13.5	460
4	β -cell-specific deletion of the Igf1 receptor leads to hyperinsulinemia and glucose intolerance but does not alter β -cell mass. <i>Nature Genetics</i> , 2002, 31, 111-115.	9.4	345
5	Insulin Signaling in β Cells Modulates Glucagon Secretion In Vivo. <i>Cell Metabolism</i> , 2009, 9, 350-361.	7.2	271
6	Insulin receptors in beta-cells are critical for islet compensatory growth response to insulin resistance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 8977-8982.	3.3	260
7	Altered function of insulin receptor substrate-1-deficient mouse islets and cultured β -cell lines. <i>Journal of Clinical Investigation</i> , 1999, 104, R69-R75.	3.9	246
8	PDX-1 haploinsufficiency limits the compensatory islet hyperplasia that occurs in response to insulin resistance. <i>Journal of Clinical Investigation</i> , 2004, 114, 828-836.	3.9	236
9	Human β -Cell Proliferation and Intracellular Signaling. <i>Diabetes</i> , 2012, 61, 2205-2213.	0.3	208
10	Serp1b1 Promotes Pancreatic β Cell Proliferation. <i>Cell Metabolism</i> , 2016, 23, 194-205.	7.2	177
11	m6A mRNA methylation regulates human β -cell biology in physiological states and in type 2 diabetes. <i>Nature Metabolism</i> , 2019, 1, 765-774.	5.1	158
12	Inhibition of DYRK1A Stimulates Human β -Cell Proliferation. <i>Diabetes</i> , 2016, 65, 1660-1671.	0.3	157
13	Insulin Resistance Alters Islet Morphology in Nondiabetic Humans. <i>Diabetes</i> , 2014, 63, 994-1007.	0.3	152
14	Roles of Insulin Receptor Substrate-1, Phosphatidylinositol 3-Kinase, and Release of Intracellular Ca ²⁺ Stores in Insulin-stimulated Insulin Secretion in β -Cells. <i>Journal of Biological Chemistry</i> , 2000, 275, 22331-22338.	1.6	149
15	Glucose Effects on Beta-Cell Growth and Survival Require Activation of Insulin Receptors and Insulin Receptor Substrate 2. <i>Molecular and Cellular Biology</i> , 2009, 29, 3219-3228.	1.1	138
16	Liver-Derived Systemic Factors Drive β Cell Hyperplasia in Insulin-Resistant States. <i>Cell Reports</i> , 2013, 3, 401-410.	2.9	123
17	Human β -Cell Proliferation and Intracellular Signaling: Part 3. <i>Diabetes</i> , 2015, 64, 1872-1885.	0.3	120
18	Differential Roles of Insulin and IGF-1 Receptors in Adipose Tissue Development and Function. <i>Diabetes</i> , 2016, 65, 2201-2213.	0.3	114

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19	Derivation of Human Induced Pluripotent Stem Cells from Patients with Maturity Onset Diabetes of the Young*. <i>Journal of Biological Chemistry</i> , 2013, 288, 5353-5356.	1.6	102
20	Inhibition of TGF- β 2 Signaling Promotes Human Pancreatic β 2-Cell Replication. <i>Diabetes</i> , 2016, 65, 1208-1218.	0.3	94
21	Adipocyte Dynamics and Reversible Metabolic Syndrome in Mice with an Inducible Adipocyte-Specific Deletion of the Insulin Receptor. <i>Cell Metabolism</i> , 2017, 25, 448-462.	7.2	91
22	Fibroblast Growth Factor 21 (FGF21) Protects against High Fat Diet Induced Inflammation and Islet Hyperplasia in Pancreas. <i>PLoS ONE</i> , 2016, 11, e0148252.	1.1	90
23	Sex differences underlying pancreatic islet biology and its dysfunction. <i>Molecular Metabolism</i> , 2018, 15, 82-91.	3.0	90
24	Receptors for insulin and insulin-like growth factor-1 and insulin receptor substrate-1 mediate pathways that regulate islet function. <i>Biochemical Society Transactions</i> , 2002, 30, 317-322.	1.6	87
25	β 2-Cell Fate in Human Insulin Resistance and Type 2 Diabetes: A Perspective on Islet Plasticity. <i>Diabetes</i> , 2019, 68, 1121-1129.	0.3	87
26	Islet Secretory Defect in Insulin Receptor Substrate 1 Null Mice Is Linked With Reduced Calcium Signaling and Expression of Sarco(endo)plasmic Reticulum Ca ²⁺ -ATPase (SERCA)-2b and -3. <i>Diabetes</i> , 2004, 53, 1517-1525.	0.3	86
27	Insulin Signaling Regulates the FoxM1/PLK1/CENP-A Pathway to Promote Adaptive Pancreatic β 2-Cell Proliferation. <i>Cell Metabolism</i> , 2017, 25, 868-882.e5.	7.2	86
28	New Insights into the Roles of Insulin/IGF-I in the Development and Maintenance of β 2-Cell Mass. <i>Reviews in Endocrine and Metabolic Disorders</i> , 2005, 6, 199-210.	2.6	83
29	Insulin enhances glucose-stimulated insulin secretion in healthy humans. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 4770-4775.	3.3	79
30	Comprehensive Proteomics Analysis of Stressed Human Islets Identifies GDF15 as a Target for Type 1 Diabetes Intervention. <i>Cell Metabolism</i> , 2020, 31, 363-374.e6.	7.2	78
31	Soluble Factors Secreted by T Cells Promote β 2-Cell Proliferation. <i>Diabetes</i> , 2014, 63, 188-202.	0.3	65
32	The islet β 2-cell. <i>International Journal of Biochemistry and Cell Biology</i> , 2004, 36, 365-371.	1.2	63
33	Proinflammatory Cytokines Induce Endocrine Differentiation in Pancreatic Ductal Cells via STAT3-Dependent NGN3 Activation. <i>Cell Reports</i> , 2016, 15, 460-470.	2.9	61
34	Cyclin D2 Is Essential for the Compensatory β 2-Cell Hyperplastic Response to Insulin Resistance in Rodents. <i>Diabetes</i> , 2010, 59, 987-996.	0.3	60
35	The role of the carboxyl ester lipase (CEL) gene in pancreatic disease. <i>Pancreatology</i> , 2018, 18, 12-19.	0.5	60
36	Early Developmental Perturbations in a Human Stem Cell Model of MODY5/HNF1B Pancreatic Hypoplasia. <i>Stem Cell Reports</i> , 2016, 6, 357-367.	2.3	57

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37	Insulin Signaling Regulates Mitochondrial Function in Pancreatic β -Cells. PLoS ONE, 2009, 4, e7983.	1.1	57
38	Insulin Augmentation of Glucose-Stimulated Insulin Secretion Is Impaired in Insulin-Resistant Humans. Diabetes, 2012, 61, 301-309.	0.3	54
39	X-Box Binding Protein 1 Is Essential for Insulin Regulation of Pancreatic β -Cell Function. Diabetes, 2013, 62, 2439-2449.	0.3	54
40	Palmitate Induces mRNA Translation and Increases ER Protein Load in Islet β -Cells via Activation of the Mammalian Target of Rapamycin Pathway. Diabetes, 2014, 63, 3404-3415.	0.3	48
41	Forced Hepatic Overexpression of CEACAM1 Curtails Diet-Induced Insulin Resistance. Diabetes, 2015, 64, 2780-2790.	0.3	48
42	Toll-like receptors TLR2 and TLR4 block the replication of pancreatic β cells in diet-induced obesity. Nature Immunology, 2019, 20, 677-686.	7.0	48
43	Comparable Generation of Activin-Induced Definitive Endoderm via Additive Wnt or BMP Signaling in Absence of Serum. Stem Cell Reports, 2014, 3, 5-14.	2.3	47
44	RADAR: differential analysis of MeRIP-seq data with a random effect model. Genome Biology, 2019, 20, 294.	3.8	46
45	MOLECULAR BIOLOGY: HNFs--Linking the Liver and Pancreatic Islets in Diabetes. Science, 2004, 303, 1311-1312.	6.0	44
46	New Opportunities: Harnessing Induced Pluripotency for Discovery in Diabetes and Metabolism. Cell Metabolism, 2013, 18, 775-791.	7.2	44
47	Isoform-selective inhibitor of histone deacetylase 3 (HDAC3) limits pancreatic islet infiltration and protects female nonobese diabetic mice from diabetes. Journal of Biological Chemistry, 2017, 292, 17598-17608.	1.6	43
48	Human duct cells contribute to β cell compensation in insulin resistance. JCI Insight, 2019, 4, .	2.3	43
49	Insulin regulates carboxypeptidase E by modulating translation initiation scaffolding protein eIF4G1 in pancreatic β cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2319-28.	3.3	42
50	Parental metabolic syndrome epigenetically reprograms offspring hepatic lipid metabolism in mice. Journal of Clinical Investigation, 2020, 130, 2391-2407.	3.9	42
51	Preserved DNA Damage Checkpoint Pathway Protects against Complications in Long-Standing Type 1 Diabetes. Cell Metabolism, 2015, 22, 239-252.	7.2	40
52	Carboxyl-Ester Lipase Maturity-Onset Diabetes of the Young Is Associated With Development of Pancreatic Cysts and Upregulated MAPK Signaling in Secretin-Stimulated Duodenal Fluid. Diabetes, 2014, 63, 259-269.	0.3	38
53	Increased β -cell proliferation before immune cell invasion prevents progression of type 1 diabetes. Nature Metabolism, 2019, 1, 509-518.	5.1	38
54	The regulation of pre- and post-maturational plasticity of mammalian islet cell mass. Diabetologia, 2014, 57, 1291-1303.	2.9	37

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55	Fluorescent probes for G-protein-coupled receptor drug discovery. <i>Expert Opinion on Drug Discovery</i> , 2018, 13, 933-947.	2.5	37
56	HNF4A Haploinsufficiency in MODY1 Abrogates Liver and Pancreas Differentiation from Patient-Derived Induced Pluripotent Stem Cells. <i>iScience</i> , 2019, 16, 192-205.	1.9	37
57	β -Cell Glucose Sensitivity Is Linked to Insulin/Glucagon Bihormonal Cells in Nondiabetic Humans. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2016, 101, 470-475.	1.8	34
58	Maternal insulin resistance and transient hyperglycemia impact the metabolic and endocrine phenotypes of offspring. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2014, 307, E906-E918.	1.8	33
59	GLP-1 signalling compensates for impaired insulin signalling in regulating beta cell proliferation in β IRKO mice. <i>Diabetologia</i> , 2017, 60, 1442-1453.	2.9	33
60	Epigenetic modifiers of islet function and mass. <i>Trends in Endocrinology and Metabolism</i> , 2014, 25, 628-636.	3.1	32
61	Signaling between pancreatic β cells and macrophages via S100 calcium-binding protein A8 exacerbates β -cell apoptosis and islet inflammation. <i>Journal of Biological Chemistry</i> , 2018, 293, 5934-5946.	1.6	32
62	Maternal and paternal exercise regulate offspring metabolic health and beta cell phenotype. <i>BMJ Open Diabetes Research and Care</i> , 2020, 8, e000890.	1.2	31
63	A MAFC-lncRNA axis links systemic nutrient abundance to hepatic glucose metabolism. <i>Nature Communications</i> , 2020, 11, 644.	5.8	29
64	High-level Gpr56 expression is dispensable for the maintenance and function of hematopoietic stem and progenitor cells in mice. <i>Stem Cell Research</i> , 2015, 14, 307-322.	0.3	26
65	Luseogliflozin increases beta cell proliferation through humoral factors that activate an insulin receptor- and IGF-1 receptor-independent pathway. <i>Diabetologia</i> , 2020, 63, 577-587.	2.9	25
66	Abnormal exocrine-endocrine cell cross-talk promotes β -cell dysfunction and loss in MODY8. <i>Nature Metabolism</i> , 2022, 4, 76-89.	5.1	25
67	Exogenous Insulin Enhances Glucose-Stimulated Insulin Response in Healthy Humans Independent of Changes in Free Fatty Acids. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2011, 96, 3811-3821.	1.8	24
68	Dissecting diabetes/metabolic disease mechanisms using pluripotent stem cells and genome editing tools. <i>Molecular Metabolism</i> , 2015, 4, 593-604.	3.0	24
69	How, When, and Where Do Human β -Cells Regenerate?. <i>Current Diabetes Reports</i> , 2019, 19, 48.	1.7	23
70	Compensatory Islet Response to Insulin Resistance Revealed by Quantitative Proteomics. <i>Journal of Proteome Research</i> , 2015, 14, 3111-3122.	1.8	22
71	Blockade of cannabinoid 1 receptor improves glucose responsiveness in pancreatic beta cells. <i>Journal of Cellular and Molecular Medicine</i> , 2018, 22, 2337-2345.	1.6	21
72	Nuclear Export of FoxO1 Is Associated with ERK Signaling in β -Cells Lacking Insulin Receptors. <i>Journal of Biological Chemistry</i> , 2016, 291, 21485-21495.	1.6	20

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73	Native Zinc Catalyzes Selective and Traceless Release of Small Molecules in β -Cells. <i>Journal of the American Chemical Society</i> , 2020, 142, 6477-6482.	6.6	20
74	Absence of Diabetes and Pancreatic Exocrine Dysfunction in a Transgenic Model of Carboxyl-Ester Lipase-MODY (Maturity-Onset Diabetes of the Young). <i>PLoS ONE</i> , 2013, 8, e60229.	1.1	20
75	miRNAs and lncRNAs underlying the β -cell adaptation to insulin resistance. <i>Molecular Metabolism</i> , 2019, 27, S42-S48.	3.0	19
76	Insulin receptor-mediated signaling regulates pluripotency markers and lineage differentiation. <i>Molecular Metabolism</i> , 2018, 18, 153-163.	3.0	18
77	IRS1 deficiency protects β -cells against ER stress-induced apoptosis by modulating sXBP-1 stability and protein translation. <i>Scientific Reports</i> , 2016, 6, 28177.	1.6	16
78	Loss-of-Function Mutation in Thiamine Transporter 1 in a Family With Autosomal Dominant Diabetes. <i>Diabetes</i> , 2019, 68, 1084-1093.	0.3	16
79	GCK-MODY diabetes as a protein misfolding disease: The mutation R275C promotes protein misfolding, self-association and cellular degradation. <i>Molecular and Cellular Endocrinology</i> , 2014, 382, 55-65.	1.6	15
80	Using single-nucleus RNA-sequencing to interrogate transcriptomic profiles of archived human pancreatic islets. <i>Genome Medicine</i> , 2021, 13, 128.	3.6	15
81	GIP: No Longer the Neglected Incretin Twin?. <i>Science Translational Medicine</i> , 2010, 2, 49ps47.	5.8	14
82	Differential roles of FOXO transcription factors on insulin action in brown and white adipose tissue. <i>Journal of Clinical Investigation</i> , 2021, 131, .	3.9	14
83	Is Transforming Stem Cells to Pancreatic Beta Cells Still the Holy Grail for Type 2 Diabetes?. <i>Current Diabetes Reports</i> , 2016, 16, 70.	1.7	13
84	Heterogeneity of proliferative markers in pancreatic β -cells of patients with severe hypoglycemia following Roux-en-Y gastric bypass. <i>Acta Diabetologica</i> , 2017, 54, 737-747.	1.2	13
85	Cellular stress drives pancreatic plasticity. <i>Science Translational Medicine</i> , 2015, 7, 273ps2.	5.8	11
86	Excessive Cellular Proliferation Negatively Impacts Reprogramming Efficiency of Human Fibroblasts. <i>Stem Cells Translational Medicine</i> , 2015, 4, 1101-1108.	1.6	11
87	The Hypoglycemic Phenotype Is Islet Cell "Autonomous in Short-Chain Hydroxyacyl-CoA Dehydrogenase" Deficient Mice. <i>Diabetes</i> , 2016, 65, 1672-1678.	0.3	11
88	Hepatic IRF3 fuels dysglycemia in obesity through direct regulation of <i>Ppp2r1b</i> . <i>Science Translational Medicine</i> , 2022, 14, eabh3831.	5.8	11
89	The Polycomb protein, Bmi1, regulates insulin sensitivity. <i>Molecular Metabolism</i> , 2014, 3, 794-802.	3.0	10
90	Forkhead box protein O1 (FoxO1) regulates hepatic serine protease inhibitor B1 (serpinB1) expression in a non-cell-autonomous fashion. <i>Journal of Biological Chemistry</i> , 2019, 294, 1059-1069.	1.6	10

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91	Epigenetics in β -cell adaptation and type 2 diabetes. <i>Current Opinion in Pharmacology</i> , 2020, 55, 125-131.	1.7	10
92	Harnessing reaction-based probes to preferentially target pancreatic β -cells and β -like cells. <i>Life Science Alliance</i> , 2021, 4, e202000840.	1.3	10
93	Ephs and Ephrins Keep Pancreatic β Cells Connected. <i>Cell</i> , 2007, 129, 241-243.	13.5	9
94	Insulin receptor substrate 1, but not IRS2, plays a dominant role in regulating pancreatic alpha cell function in mice. <i>Journal of Biological Chemistry</i> , 2021, 296, 100646.	1.6	9
95	Insulin regulates arginine-stimulated insulin secretion in humans. <i>Metabolism: Clinical and Experimental</i> , 2022, 128, 155117.	1.5	9
96	Early results of medial opening wedge high tibial osteotomy using an intraosseous implant with accelerated rehabilitation. <i>European Journal of Orthopaedic Surgery and Traumatology</i> , 2019, 29, 147-156.	0.6	8
97	Identifying Biomarkers of Subclinical Diabetes. <i>Diabetes</i> , 2012, 61, 1925-1926.	0.3	7
98	Tissue-Specific Targeting of the Insulin Receptor Gene. <i>Endocrine</i> , 2002, 19, 257-266.	2.2	6
99	Dynamic proteome profiling of human pluripotent stem cell-derived pancreatic progenitors. <i>Stem Cells</i> , 2020, 38, 542-555.	1.4	6
100	Glucose Controls the Expression of Polypyrimidine Tract-Binding Protein 1 via the Insulin Receptor Signaling Pathway in Pancreatic β Cells. <i>Molecules and Cells</i> , 2018, 41, 909-916.	1.0	6
101	Gut Microbiota Regulate Pancreatic Growth, Exocrine Function, and Gut Hormones. <i>Diabetes</i> , 2022, 71, 945-960.	0.3	6
102	Increased Glucose-induced Secretion of Glucagon-like Peptide-1 in Mice Lacking the Carcinoembryonic Antigen-related Cell Adhesion Molecule 2 (CEACAM2). <i>Journal of Biological Chemistry</i> , 2016, 291, 980-988.	1.6	5
103	Age-dependent insulin resistance in male mice with null deletion of the carcinoembryonic antigen-related cell adhesion molecule 2 gene. <i>Diabetologia</i> , 2017, 60, 1751-1760.	2.9	5
104	Nuclear import of glucokinase in pancreatic beta-cells is mediated by a nuclear localization signal and modulated by SUMOylation. <i>Molecular and Cellular Endocrinology</i> , 2017, 454, 146-157.	1.6	5
105	Attenuation of PKC δ enhances metabolic activity and promotes expansion of blood progenitors. <i>EMBO Journal</i> , 2018, 37, .	3.5	5
106	More is better: combinatorial therapy to restore β -cell function in diabetes. <i>Nature Metabolism</i> , 2020, 2, 130-131.	5.1	5
107	A Systematic Comparison of Protocols for Recovery of High-Quality RNA from Human Islets Extracted by Laser Capture Microdissection. <i>Biomolecules</i> , 2021, 11, 625.	1.8	5
108	ERR α : A New Player in β Cell Maturation. <i>Cell Metabolism</i> , 2016, 23, 765-767.	7.2	3

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109	Harnessing Immune Cells to Enhance β -Cell Mass in Type 1 Diabetes. <i>Journal of Investigative Medicine</i> , 2016, 64, 14-20.	0.7	2
110	Leptin Receptor Signaling Regulates Protein Synthesis Pathways and Neuronal Differentiation in Pluripotent Stem Cells. <i>Stem Cell Reports</i> , 2020, 15, 1067-1079.	2.3	2
111	New-found brake calibrates insulin action in β -cells. <i>Nature</i> , 2021, 590, 221-223.	13.7	2
112	Defective insulin receptor signaling in hPSCs skews pluripotency and negatively perturbs neural differentiation. <i>Journal of Biological Chemistry</i> , 2021, 296, 100495.	1.6	2
113	Uncoupling Modifier Genes from Uncoupling Protein 2 in Pancreatic β -Cells. <i>Endocrinology</i> , 2009, 150, 2994-2996.	1.4	1