# Rohit N Kulkarni

List of Publications by Year
in descending order



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|---|---|---|---|
| 113 papers | 8,638 citations | 66343 42 h-index | 45317 90 g-index |
| 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 Î² Cells Creates an Insulin Secretory Defect Similar to that in Type 2 Diabetes. Cell, 1999, 96, 329-339. | 28.9 | 1,093 |
| 2 | Loss of Insulin Signaling in Hepatocytes Leads to Severe Insulin Resistance and Progressive Hepatic Dysfunction. Molecular Cell, 2000, 6, 87-97. | 9.7 | 1,077 |
| 3 | Loss of ARNT/HIF1Î² Mediates Altered Gene Expression and Pancreatic-Islet Dysfunction in Human Type 2 Diabetes. Cell, 2005, 122, 337-349. | 28.9 | 460 |
| 4 | Î²-cellâ€“specific deletion of the Igf1 receptor leads to hyperinsulinemia and glucose intolerance but does not alter Î²-cell mass. Nature Genetics, 2002, 31, 111-115. | 21.4 | 345 |
| 5 | Insulin Signaling in Î± Cells Modulates Glucagon Secretion In Vivo. Cell Metabolism, 2009, 9, 350-361. | 16.2 | 271 |
| 6 | Insulin receptors in beta-cells are critical for islet compensatory growth response to insulin resistance. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8977-8982. | 7.1 | 260 |
| 7 | Altered function of insulin receptor substrate-1â€“deficient mouse islets and cultured Î²-cell lines. Journal of Clinical Investigation, 1999, 104, R69-R75. | 8.2 | 246 |
| 8 | PDX-1 haploinsufficiency limits the compensatory islet hyperplasia that occurs in response to insulin resistance. Journal of Clinical Investigation, 2004, 114, 828-836. | 8.2 | 236 |
| 9 | Human Î²-Cell Proliferation and Intracellular Signaling. Diabetes, 2012, 61, 2205-2213. | 0.6 | 208 |
| 10 | SerpinB1 Promotes Pancreatic Î² Cell Proliferation. Cell Metabolism, 2016, 23, 194-205. | 16.2 | 177 |
| 11 | m6A mRNA methylation regulates human Î²-cell biology in physiological states and in type 2 diabetes. Nature Metabolism, 2019, 1, 765-774. | 11.9 | 158 |
| 12 | Inhibition of DYRK1A Stimulates Human Î²-Cell Proliferation. Diabetes, 2016, 65, 1660-1671. | 0.6 | 157 |
| 13 | Insulin Resistance Alters Islet Morphology in Nondiabetic Humans. Diabetes, 2014, 63, 994-1007. | 0.6 | 152 |
| 14 | Roles of Insulin Receptor Substrate-1, Phosphatidylinositol 3-Kinase, and Release of Intracellular Ca2+ Stores in Insulin-stimulated Insulin Secretion in Î²-Cells. Journal of Biological Chemistry, 2000, 275, 22331-22338. | 3.4 | 149 |
| 15 | Glucose Effects on Beta-Cell Growth and Survival Require Activation of Insulin Receptors and Insulin Receptor Substrate 2. Molecular and Cellular Biology, 2009, 29, 3219-3228. | 2.3 | 138 |
| 16 | Liver-Derived Systemic Factors Drive Î² Cell Hyperplasia in Insulin-Resistant States. Cell Reports, 2013, 3, 401-410. | 6.4 | 123 |
| 17 | Human Î²-Cell Proliferation and Intracellular Signaling: Part 3. Diabetes, 2015, 64, 1872-1885. | 0.6 | 120 |
| 18 | Differential Roles of Insulin and IGF-1 Receptors in Adipose Tissue Development and Function. Diabetes, 2016, 65, 2201-2213. | 0.6 | 114 |

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|---|---|---|---|
| 19 | Derivation of Human Induced Pluripotent Stem Cells from Patients with Maturity Onset Diabetes of the Young*. Journal of Biological Chemistry, 2013, 288, 5353-5356. | 3.4 | 102 |
| 20 | Inhibition of TGF-Î² Signaling Promotes Human Pancreatic Î²-Cell Replication. Diabetes, 2016, 65, 1208-1218. | 0.6 | 94 |
| 21 | Adipocyte Dynamics and Reversible Metabolic Syndrome in Mice with an Inducible Adipocyte-Specific Deletion of the Insulin Receptor. Cell Metabolism, 2017, 25, 448-462. | 16.2 | 91 |
| 22 | Fibroblast Growth Factor 21 (FGF21) Protects against High Fat Diet Induced Inflammation and Islet Hyperplasia in Pancreas. PLoS ONE, 2016, 11, e0148252. | 2.5 | 90 |
| 23 | Sex differences underlying pancreatic islet biology and its dysfunction. Molecular Metabolism, 2018, 15, 82-91. | 6.5 | 90 |
| 24 | Receptors for insulin and insulin-like growth factor-1 and insulin receptor substrate-1 mediate pathways that regulate islet function. Biochemical Society Transactions, 2002, 30, 317-322. | 3.4 | 87 |
| 25 | Î²-Cell Fate in Human Insulin Resistance and Type 2 Diabetes: A Perspective on Islet Plasticity. Diabetes, 2019, 68, 1121-1129. | 0.6 | 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 Ca2+-ATPase (SERCA)-2b and -3. Diabetes, 2004, 53, 1517-1525. | 0.6 | 86 |
| 27 | Insulin Signaling Regulates the FoxM1/PLK1/CENP-A Pathway to Promote Adaptive Pancreatic Î²ÂCell Proliferation. Cell Metabolism, 2017, 25, 868-882.e5. | 16.2 | 86 |
| 28 | New Insights into the Roles of Insulin/IGF-I in the Development and Maintenance of Î²-Cell Mass. Reviews in Endocrine and Metabolic Disorders, 2005, 6, 199-210. | 5.7 | 83 |
| 29 | Insulin enhances glucose-stimulated insulin secretion in healthy humans. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4770-4775. | 7.1 | 79 |
| 30 | Comprehensive Proteomics Analysis of Stressed Human Islets Identifies GDF15 as a Target for Type 1 Diabetes Intervention. Cell Metabolism, 2020, 31, 363-374.e6. | 16.2 | 78 |
| 31 | Soluble Factors Secreted by T Cells Promote Î²-Cell Proliferation. Diabetes, 2014, 63, 188-202. | 0.6 | 65 |
| 32 | The islet Î²-cell. International Journal of Biochemistry and Cell Biology, 2004, 36, 365-371. | 2.8 | 63 |
| 33 | Proinflammatory Cytokines Induce Endocrine Differentiation in Pancreatic Ductal Cells via STAT3-Dependent NGN3 Activation. Cell Reports, 2016, 15, 460-470. | 6.4 | 61 |
| 34 | Cyclin D2 Is Essential for the Compensatory Î²-Cell Hyperplastic Response to Insulin Resistance in Rodents. Diabetes, 2010, 59, 987-996. | 0.6 | 60 |
| 35 | The role of the carboxyl ester lipase (CEL) gene in pancreatic disease. Pancreatology, 2018, 18, 12-19. | 1.1 | 60 |
| 36 | Early Developmental Perturbations in a Human Stem Cell Model of MODY5/HNF1B Pancreatic Hypoplasia. Stem Cell Reports, 2016, 6, 357-367. | 4.8 | 57 |

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|---|---|---|---|
| 37 | Insulin Signaling Regulates Mitochondrial Function in Pancreatic Î²-Cells. PLoS ONE, 2009, 4, e7983. | 2.5 | 57 |
| 38 | Insulin Augmentation of Glucose-Stimulated Insulin Secretion Is Impaired in Insulin-Resistant Humans. Diabetes, 2012, 61, 301-309. | 0.6 | 54 |
| 39 | X-Box Binding Protein 1 Is Essential for Insulin Regulation of Pancreatic Î±-Cell Function. Diabetes, 2013, 62, 2439-2449. | 0.6 | 54 |
| 40 | Palmitate Induces mRNA Translation and Increases ER Protein Load in Islet Î²-Cells via Activation of the Mammalian Target of Rapamycin Pathway. Diabetes, 2014, 63, 3404-3415. | 0.6 | 48 |
| 41 | Forced Hepatic Overexpression of CEACAM1 Curtails Diet-Induced Insulin Resistance. Diabetes, 2015, 64, 2780-2790. | 0.6 | 48 |
| 42 | Toll-like receptors TLR2 and TLR4 block the replication of pancreatic Î² cells in diet-induced obesity. Nature Immunology, 2019, 20, 677-686. | 14.5 | 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. | 4.8 | 47 |
| 44 | RADAR: differential analysis of MeRIP-seq data with a random effect model. Genome Biology, 2019, 20, 294. | 8.8 | 46 |
| 45 | MOLECULAR BIOLOGY: HNFs--Linking the Liver and Pancreatic Islets in Diabetes. Science, 2004, 303, 1311-1312. | 12.6 | 44 |
| 46 | New Opportunities: Harnessing Induced Pluripotency for Discovery in Diabetes and Metabolism. Cell Metabolism, 2013, 18, 775-791. | 16.2 | 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. | 3.4 | 43 |
| 48 | Human duct cells contribute to Î² cell compensation in insulin resistance. JCI Insight, 2019, 4, . | 5.0 | 43 |
| 49 | Insulin regulates carboxypeptidase E by modulating translation initiation scaffolding protein eIF4G1 in pancreatic Î² cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2319-28. | 7.1 | 42 |
| 50 | Parental metabolic syndrome epigenetically reprograms offspring hepatic lipid metabolism in mice. Journal of Clinical Investigation, 2020, 130, 2391-2407. | 8.2 | 42 |
| 51 | Preserved DNA Damage Checkpoint Pathway Protects against Complications in Long-Standing Type 1 Diabetes. Cell Metabolism, 2015, 22, 239-252. | 16.2 | 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. | 0.6 | 38 |
| 53 | Increased Î²-cell proliferation before immune cell invasion prevents progression of type 1 diabetes. Nature Metabolism, 2019, 1, 509-518. | 11.9 | 38 |
| 54 | The regulation of pre- and post-maturational plasticity of mammalian islet cell mass. Diabetologia, 2014, 57, 1291-1303. | 6.3 | 37 |

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|---|---|---|---|
| 55 | Fluorescent probes for G-protein-coupled receptor drug discovery. Expert Opinion on Drug Discovery, 2018, 13, 933-947. | 5.0 | 37 |
| 56 | HNF4A Haploinsufficiency in MODY1 Abrogates Liver and Pancreas Differentiation from Patient-Derived Induced Pluripotent Stem Cells. IScience, 2019, 16, 192-205. | 4.1 | 37 |
| 57 | Î²-Cell Glucose Sensitivity Is Linked to Insulin/Glucagon Bihormonal Cells in Nondiabetic Humans. Journal of Clinical Endocrinology and Metabolism, 2016, 101, 470-475. | 3.6 | 34 |
| 58 | Maternal insulin resistance and transient hyperglycemia impact the metabolic and endocrine phenotypes of offspring. American Journal of Physiology - Endocrinology and Metabolism, 2014, 307, E906-E918. | 3.5 | 33 |
| 59 | GLP-1 signalling compensates for impaired insulin signalling in regulating beta cell proliferation in Î²IRKO mice. Diabetologia, 2017, 60, 1442-1453. | 6.3 | 33 |
| 60 | Epigenetic modifiers of islet function and mass. Trends in Endocrinology and Metabolism, 2014, 25, 628-636. | 7.1 | 32 |
| 61 | Signaling between pancreatic Î² cells and macrophages via S100 calcium-binding protein A8 exacerbates Î²-cell apoptosis and islet inflammation. Journal of Biological Chemistry, 2018, 293, 5934-5946. | 3.4 | 32 |
| 62 | Maternal and paternal exercise regulate offspring metabolic health and beta cell phenotype. BMJ Open Diabetes Research and Care, 2020, 8, e000890. | 2.8 | 31 |
| 63 | A MAFG-lncRNA axis links systemic nutrient abundance to hepatic glucose metabolism. Nature Communications, 2020, 11, 644. | 12.8 | 29 |
| 64 | High-level Gpr56 expression is dispensable for the maintenance and function of hematopoietic stem and progenitor cells in mice. Stem Cell Research, 2015, 14, 307-322. | 0.7 | 26 |
| 65 | Luseogliflozin increases beta cell proliferation through humoral factors that activate an insulin receptor- and IGF-1 receptor-independent pathway. Diabetologia, 2020, 63, 577-587. | 6.3 | 25 |
| 66 | Abnormal exocrineâ€“endocrine cell cross-talk promotes Î²-cell dysfunction and loss in MODY8. Nature Metabolism, 2022, 4, 76-89. | 11.9 | 25 |
| 67 | Exogenous Insulin Enhances Glucose-Stimulated Insulin Response in Healthy Humans Independent of Changes in Free Fatty Acids. Journal of Clinical Endocrinology and Metabolism, 2011, 96, 3811-3821. | 3.6 | 24 |
| 68 | Dissecting diabetes/metabolic disease mechanisms using pluripotent stem cells and genome editing tools. Molecular Metabolism, 2015, 4, 593-604. | 6.5 | 24 |
| 69 | How, When, and Where Do Human Î²-Cells Regenerate?. Current Diabetes Reports, 2019, 19, 48. | 4.2 | 23 |
| 70 | Compensatory Islet Response to Insulin Resistance Revealed by Quantitative Proteomics. Journal of Proteome Research, 2015, 14, 3111-3122. | 3.7 | 22 |
| 71 | Blockade of cannabinoid 1 receptor improves glucose responsiveness in pancreatic beta cells. Journal of Cellular and Molecular Medicine, 2018, 22, 2337-2345. | 3.6 | 21 |
| 72 | Nuclear Export of FoxO1 Is Associated with ERK Signaling in Î²-Cells Lacking Insulin Receptors. Journal of Biological Chemistry, 2016, 291, 21485-21495. | 3.4 | 20 |

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|---|---|---|---|
| 73 | Native Zinc Catalyzes Selective and Traceless Release of Small Molecules in Î²-Cells. Journal of the American Chemical Society, 2020, 142, 6477-6482. | 13.7 | 20 |
| 74 | Absence of Diabetes and Pancreatic Exocrine Dysfunction in a Transgenic Model of Carboxyl-Ester Lipase-MODY (Maturity-Onset Diabetes of the Young). PLoS ONE, 2013, 8, e60229. | 2.5 | 20 |
| 75 | â€œOmicsâ€•and â€œepi-omicsâ€•underlying the Î²-cell adaptation to insulin resistance. Molecular Metabolism, 2019, 27, S42-S48. | 6.5 | 19 |
| 76 | Insulin receptor-mediated signaling regulates pluripotency markers and lineage differentiation. Molecular Metabolism, 2018, 18, 153-163. | 6.5 | 18 |
| 77 | IRS1 deficiency protects Î²-cells against ER stress-induced apoptosis by modulating sXBP-1 stability and protein translation. Scientific Reports, 2016, 6, 28177. | 3.3 | 16 |
| 78 | Loss-of-Function Mutation in Thiamine Transporter 1 in a Family With Autosomal Dominant Diabetes. Diabetes, 2019, 68, 1084-1093. | 0.6 | 16 |
| 79 | GCK-MODY diabetes as a protein misfolding disease: The mutation R275C promotes protein misfolding, self-association and cellular degradation. Molecular and Cellular Endocrinology, 2014, 382, 55-65. | 3.2 | 15 |
| 80 | Using single-nucleus RNA-sequencing to interrogate transcriptomic profiles of archived human pancreatic islets. Genome Medicine, 2021, 13, 128. | 8.2 | 15 |
| 81 | GIP: No Longer the Neglected Incretin Twin?. Science Translational Medicine, 2010, 2, 49ps47. | 12.4 | 14 |
| 82 | Differential roles of FOXO transcription factors on insulin action in brown and white adipose tissue. Journal of Clinical Investigation, 2021, 131, . | 8.2 | 14 |
| 83 | Is Transforming Stem Cells to Pancreatic Beta Cells Still the Holy Grail for Type 2 Diabetes?. Current Diabetes Reports, 2016, 16, 70. | 4.2 | 13 |
| 84 | Heterogeneity of proliferative markers in pancreatic Î²-cells of patients with severe hypoglycemia following Roux-en-Y gastric bypass. Acta Diabetologica, 2017, 54, 737-747. | 2.5 | 13 |
| 85 | Cellular stress drives pancreatic plasticity. Science Translational Medicine, 2015, 7, 273ps2. | 12.4 | 11 |
| 86 | Excessive Cellular Proliferation Negatively Impacts Reprogramming Efficiency of Human Fibroblasts. Stem Cells Translational Medicine, 2015, 4, 1101-1108. | 3.3 | 11 |
| 87 | The Hypoglycemic Phenotype Is Islet Cellâ€"Autonomous in Short-Chain Hydroxyacyl-CoA Dehydrogenaseâ€"Deficient Mice. Diabetes, 2016, 65, 1672-1678. | 0.6 | 11 |
| 88 | Hepatic IRF3 fuels dysglycemia in obesity through direct regulation of <i>Ppp2r1b</i>. Science Translational Medicine, 2022, 14, eabh3831. | 12.4 | 11 |
| 89 | The Polycomb protein, Bmi1, regulates insulin sensitivity. Molecular Metabolism, 2014, 3, 794-802. | 6.5 | 10 |
| 90 | Forkhead box protein O1 (FoxO1) regulates hepatic serine protease inhibitor B1 (serpinB1) expression in a non-cell-autonomous fashion. Journal of Biological Chemistry, 2019, 294, 1059-1069. | 3.4 | 10 |

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|---|---|---|---|
| 91 | Epigenetics in Î²-cell adaptation and type 2 diabetes. Current Opinion in Pharmacology, 2020, 55, 125-131. | 3.5 | 10 |
| 92 | Harnessing reaction-based probes to preferentially target pancreatic Î²-cells and Î²-like cells. Life Science Alliance, 2021, 4, e202000840. | 2.8 | 10 |
| 93 | Ephs and Ephrins Keep Pancreatic Î² Cells Connected. Cell, 2007, 129, 241-243. | 28.9 | 9 |
| 94 | Insulin receptor substrate 1, but not IRS2, plays a dominant role in regulating pancreatic alpha cell function in mice. Journal of Biological Chemistry, 2021, 296, 100646. | 3.4 | 9 |
| 95 | Insulin regulates arginine-stimulated insulin secretion in humans. Metabolism: Clinical and Experimental, 2022, 128, 155117. | 3.4 | 9 |
| 96 | Early results of medial opening wedge high tibial osteotomy using an intraosseous implant with accelerated rehabilitation. European Journal of Orthopaedic Surgery and Traumatology, 2019, 29, 147-156. | 1.4 | 8 |
| 97 | Identifying Biomarkers of Subclinical Diabetes. Diabetes, 2012, 61, 1925-1926. | 0.6 | 7 |
| 98 | Tissue-Specific Targeting of the Insulin Receptor Gene. Endocrine, 2002, 19, 257-266. | 2.2 | 6 |
| 99 | Dynamic proteome profiling of human pluripotent stem cell-derived pancreatic progenitors. Stem Cells, 2020, 38, 542-555. | 3.2 | 6 |
| 100 | Glucose Controls the Expression of Polypyrimidine Tract-Binding Protein 1 via the Insulin Receptor Signaling Pathway in Pancreatic Î² Cells. Molecules and Cells, 2018, 41, 909-916. | 2.6 | 6 |
| 101 | Gut Microbiota Regulate Pancreatic Growth, Exocrine Function, and Gut Hormones. Diabetes, 2022, 71, 945-960. | 0.6 | 6 |
| 102 | Increased Glucose-induced Secretion of Glucagon-like Peptide-1 in Mice Lacking the Carcinoembryonic Antigen-related Cell Adhesion Molecule 2 (CEACAM2). Journal of Biological Chemistry, 2016, 291, 980-988. | 3.4 | 5 |
| 103 | Age-dependent insulin resistance in male mice with null deletion of the carcinoembryonic antigen-related cell adhesion molecule 2 gene. Diabetologia, 2017, 60, 1751-1760. | 6.3 | 5 |
| 104 | Nuclear import of glucokinase in pancreatic beta-cells is mediated by a nuclear localization signal and modulated by SUMOylation. Molecular and Cellular Endocrinology, 2017, 454, 146-157. | 3.2 | 5 |
| 105 | Attenuation of <scp>PKC</scp> Î´ enhances metabolic activity and promotes expansion of blood progenitors. EMBO Journal, 2018, 37, . | 7.8 | 5 |
| 106 | More is better: combinatorial therapy to restore Î²-cell function in diabetes. Nature Metabolism, 2020, 2, 130-131. | 11.9 | 5 |
| 107 | A Systematic Comparison of Protocols for Recovery of High-Quality RNA from Human Islets Extracted by Laser Capture Microdissection. Biomolecules, 2021, 11, 625. | 4.0 | 5 |
| 108 | ERRÎ³â€"A New Player in Î² Cell Maturation. Cell Metabolism, 2016, 23, 765-767. | 16.2 | 3 |

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|---|---|---|---|
| 109 | Harnessing Immune Cells to Enhance Î²-Cell Mass in Type 1 Diabetes. Journal of Investigative Medicine, 2016, 64, 14-20. | 1.6 | 2 |
| 110 | Leptin Receptor Signaling Regulates Protein Synthesis Pathways and Neuronal Differentiation in Pluripotent Stem Cells. Stem Cell Reports, 2020, 15, 1067-1079. | 4.8 | 2 |
| 111 | New-found brake calibrates insulin action in Î²-cells. Nature, 2021, 590, 221-223. | 27.8 | 2 |
| 112 | Defective insulin receptor signaling in hPSCs skews pluripotency and negatively perturbs neural differentiation. Journal of Biological Chemistry, 2021, 296, 100495. | 3.4 | 2 |
| 113 | Uncoupling Modifier Genes from Uncoupling Protein 2 in Pancreatic Î²-Cells. Endocrinology, 2009, 150, 2994-2996. | 2.8 | 1 |