Richard K P Benninger

List of Publications by Year
in descending order

58	3,213	186265 28	161849 54
papers	citations	h-index	g-index

63	63	63	3987
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Highly-multiplexed volumetric mapping with Raman dye imaging and tissue clearing. Nature Biotechnology, 2022, 40, 364-373.	17.5	43
2	The physiological role of Î²-cell heterogeneity in pancreatic islet function. Nature Reviews Endocrinology, 2022, 18, 9-22.	9.6	61
3	Heterogeneity of Diabetes: Î²-Cells, Phenotypes, and Precision Medicine: Proceedings of an International Symposium of the Canadian Institutes of Health Researchâ€™s Institute of Nutrition, Metabolism and Diabetes and the U.S. National Institutes of Healthâ€™s National Institute of Diabetes and Digestive and Kidney Diseases. Diabetes Care, 2022, 45, 3-22.	8.6	14
4	Dynamic changes in Î²-cell [Ca2+] regulate NFAT activation, gene transcription, and islet gap junction communication. Molecular Metabolism, 2022, 57, 101430.	6.5	7
5	Ultrasound Imaging of Pancreatic Perfusion Dynamics Predicts Therapeutic Prevention of Diabetes in Preclinical Models of Type 1 Diabetes. Ultrasound in Medicine and Biology, 2022, , .	1.5	1
6	Contrast-Enhanced Sonography with Biomimetic Lung Surfactant Nanodrops. Langmuir, 2021, 37, 2386-2396.	3.5	1
7	Optogenetic stimulation of cholinergic fibers for the modulation of insulin and glycemia. Scientific Reports, 2021, 11, 3670.	3.3	17
8	Small subpopulations of Î²-cells do not drive islet oscillatory [Ca2+] dynamics via gap junction communication. PLoS Computational Biology, 2021, 17, e1008948.	3.2	22
9	Reduced synchroneity of intra-islet Ca2+ oscillations in vivo in Robo-deficient Î² cells. ELife, 2021, 10, .	6.0	18
10	ENTPD3 Marks Mature Stem Cellâ€“Derived Î²-Cells Formed by Self-Aggregation In Vitro. Diabetes, 2021, 70, 2554-2567.	0.6	20
11	Detecting insulitis in type 1 diabetes with ultrasound phase-change contrast agents. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	3
12	Caloric restriction recovers impaired Î²-cell-Î²-cell gap junction coupling, calcium oscillation coordination, and insulin secretion in prediabetic mice. American Journal of Physiology - Endocrinology and Metabolism, 2020, 319, E709-E720.	3.5	31
13	Contrast-enhanced ultrasound with sub-micron sized contrast agents detects insulitis in mouse models of type1 diabetes. Nature Communications, 2020, 11, 2238.	12.8	37
14	From the Transcriptome to Electrophysiology: Searching for the Underlying Cause of Diabetes. Cell Metabolism, 2020, 31, 888-889.	16.2	2
15	Evidence that Evolution of the Diabetes Susceptibility Gene SLC30A8 that Encodes the Zinc Transporter ZnT8 Drives Variations in Pancreatic Islet Zinc Content in Multiple Species. Journal of Molecular Evolution, 2019, 87, 147-151.	1.8	6
16	How Heterogeneity in Glucokinase and Gap-Junction Coupling Determines the Islet [Ca2+] Response. Biophysical Journal, 2019, 117, 2188-2203.	0.5	26
17	Exendinâ€4 overcomes cytokineâ€induced decreases in gap junction coupling via protein kinase A and Epac2 in mouse and human islets. Journal of Physiology, 2019, 597, 431-447.	2.9	18
18	Contrast-enhanced ultrasound measurement of pancreatic blood flow dynamics predicts type 1 diabetes progression in preclinical models. Nature Communications, 2018, 9, 1742.	12.8	33

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19	New Understanding of Î²-Cell Heterogeneity and In Situ Islet Function. Diabetes, 2018, 67, 537-547.	0.6	116
20	The Impact of Pancreatic Beta Cell Heterogeneity on Type 1 Diabetes Pathogenesis. Current Diabetes Reports, 2018, 18, 112.	4.2	17
21	Age-Dependent Decline in the Coordinated [Ca2+] and Insulin Secretory Dynamics in Human Pancreatic Islets. Diabetes, 2017, 66, 2436-2445.	0.6	63
22	Spatially Organized Î²-Cell Subpopulations Control Electrical Dynamics across Islets of Langerhans. Biophysical Journal, 2017, 113, 1093-1108.	0.5	85
23	Zinc Transport Gets Its Zing Back: Double-Knockout of ZnT7 and ZnT8 Reveals the Importance of Zinc Transporters to Insulin Secretion. Endocrinology, 2016, 157, 4542-4544.	2.8	5
24	Low Level Pro-inflammatory Cytokines Decrease Connexin36 Gap Junction Coupling in Mouse and Human Islets through Nitric Oxide-mediated Protein Kinase CÎ´. Journal of Biological Chemistry, 2016, 291, 3184-3196.	3.4	50
25	Decreases in Gap Junction Coupling Recovers Ca2+ and Insulin Secretion in Neonatal Diabetes Mellitus, Dependent on Beta Cell Heterogeneity and Noise. PLoS Computational Biology, 2016, 12, e1005116.	3.2	19
26	Fluorescence Linear Dichroism Imaging for Quantifying Membrane Order. Methods in Molecular Biology, 2015, 1232, 161-179.	0.9	3
27	GLP1R Regualtion of Gap Junction Coupling in the Islet of Langerhans. FASEB Journal, 2015, 29, 997.7.	0.5	0
28	Phase Transitions in the Multi-cellular Regulatory Behavior of Pancreatic Islet Excitability. PLoS Computational Biology, 2014, 10, e1003819.	3.2	47
29	Intrinsic Islet Heterogeneity and Gap Junction Coupling Determine Spatiotemporal Ca2+ Wave Dynamics. Biophysical Journal, 2014, 107, 2723-2733.	0.5	84
30	Dimensionality and Size Scaling of Coordinated Ca2+ Dynamics in MIN6 Î²-cell Clusters. Biophysical Journal, 2014, 106, 299-309.	0.5	39
31	Cellular communication and heterogeneity in pancreatic islet insulin secretion dynamics. Trends in Endocrinology and Metabolism, 2014, 25, 399-406.	7.1	131
32	Selective depletion of vascular EC-SOD augments chronic hypoxic pulmonary hypertension. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2014, 307, L868-L876.	2.9	38
33	Decreasing Cx36 Gap Junction Coupling Compensates for Overactive KATP Channels to Restore Insulin Secretion and Prevent Hyperglycemia in a Mouse Model of Neonatal Diabetes. Diabetes, 2014, 63, 1685-1697.	0.6	19
34	A Common Polymorphism in Extracellular Superoxide Dismutase Affects Cardiopulmonary Disease Risk by Altering Protein Distribution. Circulation: Cardiovascular Genetics, 2014, 7, 659-666.	5.1	31
35	Fluorescence recovery after photobleaching reveals regulation and distribution of connexin36 gap junction coupling within mouse islets of Langerhans. Journal of Physiology, 2014, 592, 4431-4446.	2.9	51
36	New insights into the role of connexins in pancreatic islet function and diabetes. FEBS Letters, 2014, 588, 1278-1287.	2.8	75

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37	The MafA Transcription Factor Becomes Essential to Islet Î²-Cells Soon After Birth. Diabetes, 2014, 63, 1994-2005.	0.6	106
38	Twoâ€Photon Excitation Microscopy for the Study of Living Cells and Tissues. Current Protocols in Cell Biology, 2013, 59, Unit 4.11.1-24.	2.3	165
39	Connexin-36 Gap Junctions Regulate In Vivo First- and Second-Phase Insulin Secretion Dynamics and Glucose Tolerance in the Conscious Mouse. Diabetes, 2012, 61, 1700-1707.	0.6	158
40	GÎ±o Represses Insulin Secretion by Reducing Vesicular Docking in Pancreatic Î²-Cells. Diabetes, 2010, 59, 2522-2529.	0.6	31
41	A mathematical model of Î²â€cells in an islet of Langerhans sensing a glucose gradient. HFSP Journal, 2010, 4, 61-71.	2.5	15
42	Subcutaneous transplantation of embryonic pancreas for correction of type 1 diabetes. American Journal of Physiology - Endocrinology and Metabolism, 2009, 296, E323-E332.	3.5	11
43	Live Cell Linear Dichroism Imaging Reveals Extensive Membrane Ruffling within the Docking Structure of Natural Killer Cell Immune Synapses. Biophysical Journal, 2009, 96, L13-L15.	0.5	27
44	Rapid and inexpensive fabrication of polymeric microfluidic devices via toner transfer masking. Lab on A Chip, 2009, 9, 1119.	6.0	35
45	Photoactivation in Fluorescence Microscopy. Microscopy Today, 2009, 17, 8-13.	0.3	7
46	Deletion of the mouse Slc30a8 gene encoding zinc transporter-8 results in impaired insulin secretion. Biochemical Journal, 2009, 421, 371-376.	3.7	161
47	Optical Lock-In Detection of FRET Using Synthetic and Genetically Encoded Optical Switches. Biophysical Journal, 2008, 94, 4515-4524.	0.5	99
48	Gap Junction Coupling and Calcium Waves in the Pancreatic Islet. Biophysical Journal, 2008, 95, 5048-5061.	0.5	206
49	Single-photon-counting detector for increased sensitivity in two-photon laser scanning microscopy. Optics Letters, 2008, 33, 2895.	3.3	19
50	Fluorescence-Lifetime Imaging of DNAâ€“Dye Interactions within Continuous-Flow Microfluidic Systems. Angewandte Chemie - International Edition, 2007, 46, 2228-2231.	13.8	24
51	Rapid hyperspectral fluorescence lifetime imaging. Microscopy Research and Technique, 2007, 70, 481-484.	2.2	53
52	Quantitative 3D Mapping of Fluidic Temperatures within Microchannel Networks Using Fluorescence Lifetime Imaging. Analytical Chemistry, 2006, 78, 2272-2278.	6.5	117
53	Structurally Distinct Membrane Nanotubes between Human Macrophages Support Long-Distance Vesicular Traffic or Surfing of Bacteria. Journal of Immunology, 2006, 177, 8476-8483.	0.8	422
54	Multidimensional Fluorescence Imaging Applied to Biological Tissue. Reviews in Fluorescence, 2006, , 477-524.	0.5	10

#	Article	IF	Citations
55	Time-resolved fluorescence imaging of solvent interactions in microfluidic devices. Optics Express, 2005, 13, 6275.	3.4	53
56	Fluorescence Imaging of Two-Photon Linear Dichroism: Cholesterol Depletion Disrupts Molecular Orientation in Cell Membranes. Biophysical Journal, 2005, 88, 609-622.	0.5	77
57	Time-domain fluorescence lifetime imaging applied to biological tissue. Photochemical and Photobiological Sciences, 2004, 3, 795.	2.9	175
58	Modulation of Gap Junction Coupling Within the Islet of Langerhans During the Development of Type 1 Diabetes. Frontiers in Physiology, 0, 13, .	2.8	3