

Richard K P Benninger

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4819779/publications.pdf>

Version: 2024-02-01

58
papers

3,213
citations

186265

28
h-index

161849

54
g-index

63
all docs

63
docs citations

63
times ranked

3987
citing authors

#	ARTICLE	IF	CITATIONS
1	Structurally Distinct Membrane Nanotubes between Human Macrophages Support Long-Distance Vesicular Traffic or Surfing of Bacteria. <i>Journal of Immunology</i> , 2006, 177, 8476-8483.	0.8	422
2	Gap Junction Coupling and Calcium Waves in the Pancreatic Islet. <i>Biophysical Journal</i> , 2008, 95, 5048-5061.	0.5	206
3	Time-domain fluorescence lifetime imaging applied to biological tissue. <i>Photochemical and Photobiological Sciences</i> , 2004, 3, 795.	2.9	175
4	Two-Photon Excitation Microscopy for the Study of Living Cells and Tissues. <i>Current Protocols in Cell Biology</i> , 2013, 59, Unit 4.11.1-24.	2.3	165
5	Deletion of the mouse <i>Slc30a8</i> gene encoding zinc transporter-8 results in impaired insulin secretion. <i>Biochemical Journal</i> , 2009, 421, 371-376.	3.7	161
6	Connexin-36 Gap Junctions Regulate In Vivo First- and Second-Phase Insulin Secretion Dynamics and Glucose Tolerance in the Conscious Mouse. <i>Diabetes</i> , 2012, 61, 1700-1707.	0.6	158
7	Cellular communication and heterogeneity in pancreatic islet insulin secretion dynamics. <i>Trends in Endocrinology and Metabolism</i> , 2014, 25, 399-406.	7.1	131
8	Quantitative 3D Mapping of Fluidic Temperatures within Microchannel Networks Using Fluorescence Lifetime Imaging. <i>Analytical Chemistry</i> , 2006, 78, 2272-2278.	6.5	117
9	New Understanding of β -Cell Heterogeneity and In Situ Islet Function. <i>Diabetes</i> , 2018, 67, 537-547.	0.6	116
10	The MafA Transcription Factor Becomes Essential to Islet β -Cells Soon After Birth. <i>Diabetes</i> , 2014, 63, 1994-2005.	0.6	106
11	Optical Lock-In Detection of FRET Using Synthetic and Genetically Encoded Optical Switches. <i>Biophysical Journal</i> , 2008, 94, 4515-4524.	0.5	99
12	Spatially Organized β -Cell Subpopulations Control Electrical Dynamics across Islets of Langerhans. <i>Biophysical Journal</i> , 2017, 113, 1093-1108.	0.5	85
13	Intrinsic Islet Heterogeneity and Gap Junction Coupling Determine Spatiotemporal Ca^{2+} Wave Dynamics. <i>Biophysical Journal</i> , 2014, 107, 2723-2733.	0.5	84
14	Fluorescence Imaging of Two-Photon Linear Dichroism: Cholesterol Depletion Disrupts Molecular Orientation in Cell Membranes. <i>Biophysical Journal</i> , 2005, 88, 609-622.	0.5	77
15	New insights into the role of connexins in pancreatic islet function and diabetes. <i>FEBS Letters</i> , 2014, 588, 1278-1287.	2.8	75
16	Age-Dependent Decline in the Coordinated $[Ca^{2+}]$ and Insulin Secretory Dynamics in Human Pancreatic Islets. <i>Diabetes</i> , 2017, 66, 2436-2445.	0.6	63
17	The physiological role of β -cell heterogeneity in pancreatic islet function. <i>Nature Reviews Endocrinology</i> , 2022, 18, 9-22.	9.6	61
18	Time-resolved fluorescence imaging of solvent interactions in microfluidic devices. <i>Optics Express</i> , 2005, 13, 6275.	3.4	53

#	ARTICLE	IF	CITATIONS
19	Rapid hyperspectral fluorescence lifetime imaging. <i>Microscopy Research and Technique</i> , 2007, 70, 481-484.	2.2	53
20	Fluorescence recovery after photobleaching reveals regulation and distribution of connexin36 gap junction coupling within mouse islets of Langerhans. <i>Journal of Physiology</i> , 2014, 592, 4431-4446.	2.9	51
21	Low Level Pro-inflammatory Cytokines Decrease Connexin36 Gap Junction Coupling in Mouse and Human Islets through Nitric Oxide-mediated Protein Kinase C β . <i>Journal of Biological Chemistry</i> , 2016, 291, 3184-3196.	3.4	50
22	Phase Transitions in the Multi-cellular Regulatory Behavior of Pancreatic Islet Excitability. <i>PLoS Computational Biology</i> , 2014, 10, e1003819.	3.2	47
23	Highly-multiplexed volumetric mapping with Raman dye imaging and tissue clearing. <i>Nature Biotechnology</i> , 2022, 40, 364-373.	17.5	43
24	Dimensionality and Size Scaling of Coordinated Ca ²⁺ Dynamics in MIN6 β -cell Clusters. <i>Biophysical Journal</i> , 2014, 106, 299-309.	0.5	39
25	Selective depletion of vascular EC-SOD augments chronic hypoxic pulmonary hypertension. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2014, 307, L868-L876.	2.9	38
26	Contrast-enhanced ultrasound with sub-micron sized contrast agents detects insulinitis in mouse models of type1 diabetes. <i>Nature Communications</i> , 2020, 11, 2238.	12.8	37
27	Rapid and inexpensive fabrication of polymeric microfluidic devices via toner transfer masking. <i>Lab on A Chip</i> , 2009, 9, 1119.	6.0	35
28	Contrast-enhanced ultrasound measurement of pancreatic blood flow dynamics predicts type 1 diabetes progression in preclinical models. <i>Nature Communications</i> , 2018, 9, 1742.	12.8	33
29	C β Represses Insulin Secretion by Reducing Vesicular Docking in Pancreatic β -Cells. <i>Diabetes</i> , 2010, 59, 2522-2529.	0.6	31
30	A Common Polymorphism in Extracellular Superoxide Dismutase Affects Cardiopulmonary Disease Risk by Altering Protein Distribution. <i>Circulation: Cardiovascular Genetics</i> , 2014, 7, 659-666.	5.1	31
31	Caloric restriction recovers impaired β -cell- β -cell gap junction coupling, calcium oscillation coordination, and insulin secretion in prediabetic mice. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2020, 319, E709-E720.	3.5	31
32	Live Cell Linear Dichroism Imaging Reveals Extensive Membrane Ruffling within the Docking Structure of Natural Killer Cell Immune Synapses. <i>Biophysical Journal</i> , 2009, 96, L13-L15.	0.5	27
33	How Heterogeneity in Glucokinase and Gap-Junction Coupling Determines the Islet [Ca ²⁺] Response. <i>Biophysical Journal</i> , 2019, 117, 2188-2203.	0.5	26
34	Fluorescence-Lifetime Imaging of DNA-Dye Interactions within Continuous-Flow Microfluidic Systems. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 2228-2231.	13.8	24
35	Small subpopulations of β -cells do not drive islet oscillatory [Ca ²⁺] dynamics via gap junction communication. <i>PLoS Computational Biology</i> , 2021, 17, e1008948.	3.2	22
36	ENTPD3 Marks Mature Stem Cell-Derived β -Cells Formed by Self-Aggregation In Vitro. <i>Diabetes</i> , 2021, 70, 2554-2567.	0.6	20

#	ARTICLE	IF	CITATIONS
37	Single-photon-counting detector for increased sensitivity in two-photon laser scanning microscopy. <i>Optics Letters</i> , 2008, 33, 2895.	3.3	19
38	Decreasing Cx36 Gap Junction Coupling Compensates for Overactive KATP Channels to Restore Insulin Secretion and Prevent Hyperglycemia in a Mouse Model of Neonatal Diabetes. <i>Diabetes</i> , 2014, 63, 1685-1697.	0.6	19
39	Decreases in Gap Junction Coupling Recovers Ca ²⁺ and Insulin Secretion in Neonatal Diabetes Mellitus, Dependent on Beta Cell Heterogeneity and Noise. <i>PLoS Computational Biology</i> , 2016, 12, e1005116.	3.2	19
40	Exendin ⁴ overcomes cytokine ¹ -induced decreases in gap junction coupling via protein kinase A and Epac2 in mouse and human islets. <i>Journal of Physiology</i> , 2019, 597, 431-447.	2.9	18
41	Reduced synchronicity of intra-islet Ca ²⁺ oscillations in vivo in Robo-deficient β^2 cells. <i>ELife</i> , 2021, 10, .	6.0	18
42	The Impact of Pancreatic Beta Cell Heterogeneity on Type 1 Diabetes Pathogenesis. <i>Current Diabetes Reports</i> , 2018, 18, 112.	4.2	17
43	Optogenetic stimulation of cholinergic fibers for the modulation of insulin and glycemia. <i>Scientific Reports</i> , 2021, 11, 3670.	3.3	17
44	A mathematical model of β^2 -cells in an islet of Langerhans sensing a glucose gradient. <i>HFSP Journal</i> , 2010, 4, 61-71.	2.5	15
45	Heterogeneity of Diabetes: β^2 -Cells, Phenotypes, and Precision Medicine: Proceedings of an International Symposium of the Canadian Institutes of Health Research ¹ 's Institute of Nutrition, Metabolism and Diabetes and the U.S. National Institutes of Health ² 's National Institute of Diabetes and Digestive and Kidney Diseases. <i>Diabetes Care</i> , 2022, 45, 3-22.	8.6	14
46	Subcutaneous transplantation of embryonic pancreas for correction of type 1 diabetes. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2009, 296, E323-E332.	3.5	11
47	Multidimensional Fluorescence Imaging Applied to Biological Tissue. <i>Reviews in Fluorescence</i> , 2006, , 477-524.	0.5	10
48	Photoactivation in Fluorescence Microscopy. <i>Microscopy Today</i> , 2009, 17, 8-13.	0.3	7
49	Dynamic changes in β^2 -cell [Ca ²⁺] regulate NFAT activation, gene transcription, and islet gap junction communication. <i>Molecular Metabolism</i> , 2022, 57, 101430.	6.5	7
50	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. <i>Journal of Molecular Evolution</i> , 2019, 87, 147-151.	1.8	6
51	Zinc Transport Gets Its Zing Back: Double-Knockout of ZnT7 and ZnT8 Reveals the Importance of Zinc Transporters to Insulin Secretion. <i>Endocrinology</i> , 2016, 157, 4542-4544.	2.8	5
52	Fluorescence Linear Dichroism Imaging for Quantifying Membrane Order. <i>Methods in Molecular Biology</i> , 2015, 1232, 161-179.	0.9	3
53	Detecting insulinitis in type 1 diabetes with ultrasound phase-change contrast agents. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	3
54	Modulation of Gap Junction Coupling Within the Islet of Langerhans During the Development of Type 1 Diabetes. <i>Frontiers in Physiology</i> , 0, 13, .	2.8	3

#	ARTICLE	IF	CITATIONS
55	From the Transcriptome to Electrophysiology: Searching for the Underlying Cause of Diabetes. Cell Metabolism, 2020, 31, 888-889.	16.2	2
56	Contrast-Enhanced Sonography with Biomimetic Lung Surfactant Nanodrops. Langmuir, 2021, 37, 2386-2396.	3.5	1
57	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
58	GLP1R Regulation of Gap Junction Coupling in the Islet of Langerhans. FASEB Journal, 2015, 29, 997.7.	0.5	0