

Clayton E Mathews

List of Publications by Year in descending order

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107
papers

5,170
citations

101543

36
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110387

64
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116
all docs

116
docs citations

116
times ranked

7012
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanodroplet processing platform for deep and quantitative proteome profiling of 10 ⁴ -100 mammalian cells. <i>Nature Communications</i> , 2018, 9, 882.	12.8	384
2	Analysis of self-antigen specificity of islet-infiltrating T cells from human donors with type 1 diabetes. <i>Nature Medicine</i> , 2016, 22, 1482-1487.	30.7	232
3	Islet cell hyperexpression of HLA class I antigens: a defining feature in type 1 diabetes. <i>Diabetologia</i> , 2016, 59, 2448-2458.	6.3	214
4	Apoptotic cells induce Mer tyrosine kinase-dependent blockade of NF- κ B activation in dendritic cells. <i>Blood</i> , 2007, 109, 653-660.	1.4	187
5	Sixteen diverse laboratory mouse reference genomes define strain-specific haplotypes and novel functional loci. <i>Nature Genetics</i> , 2018, 50, 1574-1583.	21.4	169
6	Islet-Derived CD4 T Cells Targeting Proinsulin in Human Autoimmune Diabetes. <i>Diabetes</i> , 2017, 66, 722-734.	0.6	154
7	Anti-thymocyte globulin/G-CSF treatment preserves β 2 cell function in patients with established type 1 diabetes. <i>Journal of Clinical Investigation</i> , 2015, 125, 448-455.	8.2	140
8	Sepsis Induces Early Alterations in Innate Immunity That Impact Mortality to Secondary Infection. <i>Journal of Immunology</i> , 2011, 186, 195-202.	0.8	137
9	Pancreas-enriched miRNAs are altered in the circulation of subjects with diabetes: a pilot cross-sectional study. <i>Scientific Reports</i> , 2016, 6, 31479.	3.3	134
10	MerTK is required for apoptotic cell-induced T cell tolerance. <i>Journal of Experimental Medicine</i> , 2008, 205, 219-232.	8.5	127
11	NADPH Oxidase Deficiency Regulates Th Lineage Commitment and Modulates Autoimmunity. <i>Journal of Immunology</i> , 2010, 185, 5247-5258.	0.8	122
12	Neutrophil Mobilization from the Bone Marrow during Polymicrobial Sepsis Is Dependent on CXCL12 Signaling. <i>Journal of Immunology</i> , 2011, 187, 911-918.	0.8	117
13	HLA-A*0201-Restricted T Cells from Humanized NOD Mice Recognize Autoantigens of Potential Clinical Relevance to Type 1 Diabetes. <i>Journal of Immunology</i> , 2006, 176, 3257-3265.	0.8	114
14	The Role of NOD Mice in Type 1 Diabetes Research: Lessons from the Past and Recommendations for the Future. <i>Frontiers in Endocrinology</i> , 2018, 9, 51.	3.5	99
15	Boosting to Amplify Signal with Isobaric Labeling (BASIL) Strategy for Comprehensive Quantitative Phosphoproteomic Characterization of Small Populations of Cells. <i>Analytical Chemistry</i> , 2019, 91, 5794-5801.	6.5	86
16	Superoxide Production by Macrophages and T Cells Is Critical for the Induction of Autoreactivity and Type 1 Diabetes. <i>Diabetes</i> , 2011, 60, 2144-2151.	0.6	85
17	Genetic risk analysis of a patient with fulminant autoimmune type 1 diabetes mellitus secondary to combination ipilimumab and nivolumab immunotherapy. , 2016, 4, 89.		81
18	Avidity and Bystander Suppressive Capacity of Human Regulatory T Cells Expressing De Novo Autoreactive T-Cell Receptors in Type 1 Diabetes. <i>Frontiers in Immunology</i> , 2017, 8, 1313.	4.8	81

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19	New mouse model to study islet transplantation in insulin-dependent diabetes mellitus. Transplantation, 2002, 73, 1333-1336.	1.0	75
20	Mitochondrial Reactive Oxygen Species and Type 1 Diabetes. Antioxidants and Redox Signaling, 2018, 29, 1361-1372.	5.4	70
21	Immune Depletion With Cellular Mobilization Imparts Immunoregulation and Reverses Autoimmune Diabetes in Nonobese Diabetic Mice. Diabetes, 2009, 58, 2277-2284.	0.6	68
22	Constitutive differences in antioxidant defense status distinguish alloxan-resistant and alloxan-susceptible mice. Free Radical Biology and Medicine, 1999, 27, 449-455.	2.9	66
23	Use of Nonobese Diabetic Mice to Understand Human Type 1 Diabetes. Endocrinology and Metabolism Clinics of North America, 2010, 39, 541-561.	3.2	66
24	Proteasome Inhibition Alters Glucose-stimulated (Pro)insulin Secretion and Turnover in Pancreatic β -Cells. Journal of Biological Chemistry, 2005, 280, 15727-15734.	3.4	64
25	Progressive Erosion of β -Cell Function Precedes the Onset of Hyperglycemia in the NOD Mouse Model of Type 1 Diabetes. Diabetes, 2011, 60, 2086-2091.	0.6	64
26	Antithymocyte Globulin Plus G-CSF Combination Therapy Leads to Sustained Immunomodulatory and Metabolic Effects in a Subset of Responders With Established Type 1 Diabetes. Diabetes, 2016, 65, 3765-3775.	0.6	62
27	Application of a Genetic Risk Score to Racially Diverse Type 1 Diabetes Populations Demonstrates the Need for Diversity in Risk-Modeling. Scientific Reports, 2018, 8, 4529.	3.3	59
28	Nuclear and Mitochondrial Interaction Involving mt-Nd2 Leads to Increased Mitochondrial Reactive Oxygen Species Production*. Journal of Biological Chemistry, 2007, 282, 5171-5179.	3.4	57
29	Type 1 Interferons Potentiate Human CD8+ T-Cell Cytotoxicity Through a STAT4- and Granzyme β -Dependent Pathway. Diabetes, 2017, 66, 3061-3071.	0.6	56
30	Abnormal islet sphingolipid metabolism in type 1 diabetes. Diabetologia, 2018, 61, 1650-1661.	6.3	56
31	Mitochondrial ATP transporter depletion protects mice against liver steatosis and insulin resistance. Nature Communications, 2017, 8, 14477.	12.8	55
32	Pleiotropic IFN-Dependent and -Independent Effects of IRF5 on the Pathogenesis of Experimental Lupus. Journal of Immunology, 2012, 188, 4113-4121.	0.8	53
33	Mechanisms Underlying Resistance of Pancreatic Islets from ALR/Lt Mice to Cytokine-Induced Destruction. Journal of Immunology, 2005, 175, 1248-1256.	0.8	51
34	mt-Nd2 Suppresses Reactive Oxygen Species Production by Mitochondrial Complexes I and III. Journal of Biological Chemistry, 2008, 283, 10690-10697.	3.4	47
35	Type I Interferon Is a Catastrophic Feature of the Diabetic Islet Microenvironment. Frontiers in Endocrinology, 2017, 8, 232.	3.5	44
36	Role of vitamin A in mitochondrial gene expression. Diabetes Research and Clinical Practice, 2001, 54, S11-S27.	2.8	43

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37	Acute Versus Progressive Onset of Diabetes in NOD Mice: Potential Implications for Therapeutic Interventions in Type 1 Diabetes. <i>Diabetes</i> , 2015, 64, 3885-3890.	0.6	42
38	Human islet T cells are highly reactive to preproinsulin in type 1 diabetes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	42
39	Comparing Beta Cell Preservation Across Clinical Trials in Recent-Onset Type 1 Diabetes. <i>Diabetes Technology and Therapeutics</i> , 2020, 22, 948-953.	4.4	41
40	Critical Role for CXC Ligand 10/CXC Receptor 3 Signaling in the Murine Neonatal Response to Sepsis. <i>Infection and Immunity</i> , 2011, 79, 2746-2754.	2.2	40
41	Role of Increased ROS Dissipation in Prevention of T1D. <i>Annals of the New York Academy of Sciences</i> , 2008, 1150, 157-166.	3.8	39
42	Distinct differences in the responses of the human pancreatic β -cell line EndoC- β H1 and human islets to proinflammatory cytokines. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2015, 309, R525-R534.	1.8	39
43	Genetic analysis of resistance to Type-1 Diabetes in ALR/Lt mice, a NOD-related strain with defenses against autoimmune-mediated diabetogenic stress. <i>Immunogenetics</i> , 2003, 55, 491-496.	2.4	38
44	Utility of murine models for the study of spontaneous autoimmune type 1 diabetes. <i>Pediatric Diabetes</i> , 2005, 6, 165-177.	2.9	37
45	Position β 257 of I-A ^{g7} controls early anti-insulin responses in NOD mice, linking an MHC susceptibility allele to type 1 diabetes onset. <i>Science Immunology</i> , 2019, 4, .	11.9	37
46	Innate inflammation drives NK cell activation to impair Treg activity. <i>Journal of Autoimmunity</i> , 2020, 108, 102417.	6.5	36
47	A point mutation in the mitochondrial DNA of diabetes-prone BHE/cdb rats.. <i>FASEB Journal</i> , 1995, 9, 1638-1642.	0.5	35
48	T cells display mitochondria hyperpolarization in human type 1 diabetes. <i>Scientific Reports</i> , 2017, 7, 10835.	3.3	34
49	Major Histocompatibility Complex-Linked Diabetes Susceptibility in NOD/Lt Mice: Subcongenic Analysis Localizes a Component of Idd16 at the H2-D End of the Diabetogenic H2g7 Complex. <i>Diabetes</i> , 2005, 54, 1603-1606.	0.6	33
50	MerTK regulates thymic selection of autoreactive T cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 4810-4815.	7.1	33
51	Nanowell-mediated two-dimensional liquid chromatography enables deep proteome profiling of \sim 1000 mammalian cells. <i>Chemical Science</i> , 2018, 9, 6944-6951.	7.4	33
52	Noninsulin-Dependent Diabetes Mellitus as a Mitochondrial Genomic Disease. <i>Experimental Biology and Medicine</i> , 1998, 219, 97-108.	2.4	32
53	Comparative Genetics: Synergizing Human and NOD Mouse Studies for Identifying Genetic Causation of Type 1 Diabetes. <i>Review of Diabetic Studies</i> , 2012, 9, 169-187.	1.3	32
54	<i>mt-Nd2a</i> Modifies Resistance Against Autoimmune Type 1 Diabetes in NOD Mice at the Level of the Pancreatic β -Cell. <i>Diabetes</i> , 2011, 60, 355-359.	0.6	28

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55	Liquid Chromatography-Mass Spectrometry Metabolic and Lipidomic Sample Preparation Workflow for Suspension-Cultured Mammalian Cells using Jurkat T lymphocyte Cells. <i>Journal of Proteomics and Bioinformatics</i> , 2015, 08, 126-132.	0.4	28
56	Genetic control of neutrophil superoxide production in diabetes-resistant ALR/Lt mice. <i>Free Radical Biology and Medicine</i> , 2002, 32, 744-751.	2.9	27
57	Role of SREBP-1 in the Development of Parasympathetic Dysfunction in the Hearts of Type 1 Diabetic Akita Mice. <i>Circulation Research</i> , 2009, 105, 287-294.	4.5	26
58	Interferon- β Limits Diabetogenic CD8+ T-Cell Effector Responses in Type 1 Diabetes. <i>Diabetes</i> , 2017, 66, 710-721.	0.6	26
59	Immune-mediated β -cell death in type 1 diabetes: lessons from human β -cell lines. <i>European Journal of Clinical Investigation</i> , 2012, 42, 1244-1251.	3.4	25
60	Increased superoxide accumulation in pyruvate dehydrogenase complex deficient fibroblasts. <i>Molecular Genetics and Metabolism</i> , 2011, 104, 255-260.	1.1	24
61	Role of the Mitochondria in Immune-Mediated Apoptotic Death of the Human Pancreatic β Cell Line β Lox5. <i>PLoS ONE</i> , 2011, 6, e20617.	2.5	24
62	Human Pancreatic Cancer Cells Induce a MyD88-Dependent Stromal Response to Promote a Tumor-Tolerant Immune Microenvironment. <i>Cancer Research</i> , 2017, 77, 672-683.	0.9	24
63	Loss of B-Cell Anergy in Type 1 Diabetes Is Associated With High-Risk HLA and Non-HLA Disease Susceptibility Alleles. <i>Diabetes</i> , 2018, 67, 697-703.	0.6	24
64	Protecting Stem Cell Derived Pancreatic Beta-Like Cells From Diabetogenic T Cell Recognition. <i>Frontiers in Endocrinology</i> , 2021, 12, 707881.	3.5	24
65	Oxidative Stress and Beta Cell Dysfunction. <i>Methods in Molecular Biology</i> , 2012, 900, 347-362.	0.9	23
66	Do β -Cells Generate Peroxynitrite in Response to Cytokine Treatment?. <i>Journal of Biological Chemistry</i> , 2013, 288, 36567-36578.	3.4	23
67	Combination Therapy Reverses Hyperglycemia in NOD Mice With Established Type 1 Diabetes. <i>Diabetes</i> , 2015, 64, 3873-3884.	0.6	22
68	Repurposed biological scaffolds: kidney to pancreas. <i>Organogenesis</i> , 2015, 11, 47-57.	1.2	22
69	Influence of PTPN22 Allotypes on Innate and Adaptive Immune Function in Health and Disease. <i>Frontiers in Immunology</i> , 2021, 12, 636618.	4.8	21
70	ALS/Lt: A New Type 2 Diabetes Mouse Model Associated With Low Free Radical Scavenging Potential. <i>Diabetes</i> , 2004, 53, S125-S129.	0.6	20
71	Proinsulin-Reactive CD4 T Cells in the Islets of Type 1 Diabetes Organ Donors. <i>Frontiers in Endocrinology</i> , 2021, 12, 622647.	3.5	20
72	ENTPD3 Marks Mature Stem Cell-Derived β -Cells Formed by Self-Aggregation In Vitro. <i>Diabetes</i> , 2021, 70, 2554-2567.	0.6	20

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73	Respiration and substrate transport rates as well as reactive oxygen species production distinguish mitochondria from brain and liver. <i>BMC Biochemistry</i> , 2015, 16, 22.	4.4	19
74	How the Location of Superoxide Generation Influences the β -Cell Response to Nitric Oxide. <i>Journal of Biological Chemistry</i> , 2015, 290, 7952-7960.	3.4	19
75	Mechanisms of Tumor Necrosis Factor α Antagonist-Induced Lupus in a Murine Model. <i>Arthritis and Rheumatology</i> , 2015, 67, 225-237.	5.6	19
76	Branched chain amino acids and carbohydrate restriction exacerbate ketogenesis and hepatic mitochondrial oxidative dysfunction during NAFLD. <i>FASEB Journal</i> , 2020, 34, 14832-14849.	0.5	19
77	Commonalities of genetic resistance to spontaneous autoimmune and free radical-mediated diabetes. <i>Free Radical Biology and Medicine</i> , 2008, 45, 1263-1270.	2.9	18
78	Loss of NOX-Derived Superoxide Exacerbates Diabetogenic CD4 T-Cell Effector Responses in Type 1 Diabetes. <i>Diabetes</i> , 2015, 64, 4171-4183.	0.6	18
79	Islet sympathetic innervation and islet neuropathology in patients with type 1 diabetes. <i>Scientific Reports</i> , 2021, 11, 6562.	3.3	18
80	Development of diabetes in lean Ncb5or-null mice is associated with manifestations of endoplasmic reticulum and oxidative stress in beta cells. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2011, 1812, 1532-1541.	3.8	17
81	MHC characterization of ALR and ALS mice: respective similarities to the NOD and NON strains. <i>Immunogenetics</i> , 1999, 49, 722-726.	2.4	15
82	Chapter 24 Quantification, Localization, and Tissue Specificities of Mouse Mitochondrial Reactive Oxygen Species Production. <i>Methods in Enzymology</i> , 2009, 456, 439-457.	1.0	15
83	Lipid mediators and biomarkers associated with type 1 diabetes development. <i>JCI Insight</i> , 2020, 5, .	5.0	15
84	Modulatory Role of DR4- to DQ8-restricted CD4 T-Cell Responses and Type 1 Diabetes Susceptibility. <i>Diabetes</i> , 2006, 55, 3455-3462.	0.6	14
85	Neutrophil Cytosolic Factor 1 in Dendritic Cells Promotes Autoreactive CD8+ T Cell Activation via Cross-Presentation in Type 1 Diabetes. <i>Frontiers in Immunology</i> , 2019, 10, 952.	4.8	14
86	Methods to Assess Beta Cell Death Mediated by Cytotoxic T Lymphocytes. <i>Journal of Visualized Experiments</i> , 2011, .	0.3	11
87	Inherited β -Cell Dysfunction in Lean Individuals With Type 2 Diabetes. <i>Diabetes</i> , 2012, 61, 1659-1660.	0.6	11
88	Association of the mt-ND2 5178A/C polymorphism with Parkinson's disease. <i>Neuroscience Letters</i> , 2015, 587, 98-101.	2.1	11
89	The Type 1 Diabetes Resistance Locus <i>Idd22</i> Controls Trafficking of Autoreactive CTLs into the Pancreatic Islets of NOD Mice. <i>Journal of Immunology</i> , 2017, 199, 3991-4000.	0.8	11
90	Low-Dose ATG/GCSF in Established Type 1 Diabetes: A Five-Year Follow-up Report. <i>Diabetes</i> , 2021, 70, 1123-1129.	0.6	11

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91	In search of a surrogate: engineering human beta cell lines for therapy. Trends in Endocrinology and Metabolism, 2014, 25, 378-380.	7.1	10
92	Evaluating Protocols for Embryonic Stem Cell Differentiation into Insulin-Secreting β -Cells Using Insulin II-GFP as a Specific and Noninvasive Reporter. Cloning and Stem Cells, 2009, 11, 245-257.	2.6	9
93	Use of Induced Pluripotent Stem Cells to Build Isogenic Systems and Investigate Type 1 Diabetes. Frontiers in Endocrinology, 2021, 12, 737276.	3.5	8
94	Role of genetics in resistance to type 1 diabetes. Diabetes/Metabolism Research and Reviews, 2011, 27, 849-853.	4.0	7
95	Use of Chemical Probes to Detect Mitochondrial ROS by Flow Cytometry and Spectrofluorometry. Methods in Enzymology, 2014, 542, 223-241.	1.0	7
96	Observing Islet Function and Islet-Immune Cell Interactions in Live Pancreatic Tissue Slices. Journal of Visualized Experiments, 2021, , .	0.3	7
97	Overexpression of the <i>PTPN22</i> Autoimmune Risk Variant LYP-620W Fails to Restrain Human CD4+ T Cell Activation. Journal of Immunology, 2021, 207, 849-859.	0.8	7
98	Attenuation of circadian rhythms of food intake and respiration in aging diabetes-prone BHE/Cdb rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2000, 279, R230-R238.	1.8	6
99	Metabolic Abnormalities in the Pathogenesis of Type 1 Diabetes. Current Diabetes Reports, 2014, 14, 519.	4.2	6
100	Protective Role of Myeloid Cells Expressing a G-CSF Receptor Polymorphism in an Induced Model of Lupus. Frontiers in Immunology, 2018, 9, 1053.	4.8	4
101	NKG2D Signaling Within the Pancreatic Islets Reduces NOD Diabetes and Increases Protective Central Memory CD8+ T-Cell Numbers. Diabetes, 2020, 69, 1749-1762.	0.6	4
102	Rodent models for the study of type 2 diabetes in children (juvenile diabetes). Pediatric Diabetes, 2002, 3, 163-173.	2.9	3
103	Generation, Maintenance, and Adoptive Transfer of Diabetogenic T-Cell Lines/Clones From the Nonobese Diabetic Mouse. , 2004, 102, 213-226.		3
104	Disruption of hepatic one-carbon metabolism impairs mitochondrial function and enhances macrophage activity in methionine β -choline-deficient mice. Journal of Nutritional Biochemistry, 2020, 81, 108381.	4.2	3
105	The use of leptin as treatment for type 1 diabetes mellitus: counterpoint. Pediatric Diabetes, 2012, 13, 74-76.	2.9	2
106	Reply to Gurgul-Convey and Lenzen: Cytokines, Nitric Oxide, and β -Cells. Journal of Biological Chemistry, 2015, 290, 10571.	3.4	1
107	Pancreas Whole Tissue Transcriptomics Highlights the Role of the Exocrine Pancreas in Patients With Recently Diagnosed Type 1 Diabetes. Frontiers in Endocrinology, 2022, 13, 861985.	3.5	0