Budd A Tucker

List of Publications by Year
in descending order

128 papers	7,266 citations	57631 44 h-index	64668 79 g-index
131 all docs	131 docs citations	131 times ranked	7974 citing authors

#	Article	IF	Citations
1	Endogenous VEGF Is Required for Visual Function: Evidence for a Survival Role on MÃ¼ller Cells and Photoreceptors. PLoS ONE, 2008, 3, e3554.	1.1	537
2	Clinically Focused Molecular Investigation of 1000 Consecutive Families with Inherited Retinal Disease. Ophthalmology, 2017, 124, 1314-1331.	2.5	312
3	Transplantation of Adult Mouse iPS Cell-Derived Photoreceptor Precursors Restores Retinal Structure and Function in Degenerative Mice. PLoS ONE, 2011, 6, e18992.	1.1	283
4	Single-cell transcriptomics of the human retinal pigment epithelium and choroid in health and macular degeneration. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24100-24107.	3.3	234
5	ABCB5 is a limbal stem cell gene required for corneal development and repair. Nature, 2014, 511, 353-357.	13.7	217
6	Complement activation and choriocapillaris loss in early AMD: Implications for pathophysiology and therapy. Progress in Retinal and Eye Research, 2015, 45, 1-29.	7.3	189
7	Exome sequencing and analysis of induced pluripotent stem cells identify the cilia-related gene male germ cell-associated kinase (MAK) as a cause of retinitis pigmentosa. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, E569-76.	3.3	186
8	The Membrane Attack Complex in Aging Human Choriocapillaris. American Journal of Pathology, 2014, 184, 3142-3153.	1.9	174
9	Patient-specific iPSC-derived photoreceptor precursor cells as a means to investigate retinitis pigmentosa. ELife, 2013, 2, e00824.	2.8	168
10	The synergistic effects of NGF and IGFâ€1 on neurite growth in adult sensory neurons: convergence on the PI 3â€kinase signaling pathway. Journal of Neurochemistry, 2003, 86, 1116-1128.	2.1	166
11	Non-exomic and synonymous variants in ABCA4 are an important cause of Stargardt disease. Human Molecular Genetics, 2013, 22, 5136-5145.	1.4	159
12	Endurance exercise regimens induce differential effects on brain-derived neurotrophic factor, synapsin-I and insulin-like growth factor I after focal ischemia. Neuroscience, 2005, 136, 991-1001.	1.1	155
13	Exercise intensity influences the temporal profile of growth factors involved in neuronal plasticity following focal ischemia. Brain Research, 2007, 1150, 207-216.	1.1	148
14	Structural and molecular changes in the aging choroid: implications for age-related macular degeneration. Eye, 2017, 31, 10-25.	1.1	146
15	Transcriptomic analysis across nasal, temporal, and macular regions of human neural retina and RPE/choroid by RNA-Seq. Experimental Eye Research, 2014, 129, 93-106.	1.2	122
16	Using CRISPR-Cas9 to Generate Gene-Corrected Autologous iPSCs for the Treatment of Inherited Retinal Degeneration. Molecular Therapy, 2017, 25, 1999-2013.	3.7	121
17	CEP290 gene transfer rescues Leber congenital amaurosis cellular phenotype. Gene Therapy, 2014, 21, 662-672.	2.3	118
18	Patient-specific induced pluripotent stem cells (iPSCs) for the study and treatment of retinal degenerative diseases. Progress in Retinal and Eye Research, 2015, 44, 15-35.	7.3	108

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19	cGMP production of patient-specific iPSCs and photoreceptor precursor cells to treat retinal degenerative blindness. Scientific Reports, 2016, 6, 30742.	1.6	108
20	CNS Progenitor Cells Promote a Permissive Environment for Neurite Outgrowth via a Matrix Metalloproteinase-2-Dependent Mechanism. Journal of Neuroscience, 2007, 27, 4499-4506.	1.7	106
21	North Carolina Macular Dystrophy Is Caused by Dysregulation of the Retinal Transcription Factor PRDM13. Ophthalmology, 2016, 123, 9-18.	2.5	105
22	Molecular characterization of foveal versus peripheral human retina by single-cell RNA sequencing. Experimental Eye Research, 2019, 184, 234-242.	1.2	102
23	The use of progenitor cell/biodegradable MMP2â€“PLGA polymer constructs to enhance cellular integration and retinal repopulation. Biomaterials, 2010, 31, 9-19.	5.7	90
24	Retinal ganglion cells survival in a glaucoma model by GDNF/Vit E PLGA microspheres prepared according to a novel microencapsulation procedure. Journal of Controlled Release, 2011, 156, 92-100.	4.8	89
25	Use of a Synthetic Xeno-Free Culture Substrate for Induced Pluripotent Stem Cell Induction and Retinal Differentiation. Stem Cells Translational Medicine, 2013, 2, 16-24.	1.6	89
26	Transplantation of iPSC-derived TM cells rescues glaucoma phenotypes in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E3492-500.	3.3	89
27	Structural and Biochemical Analyses of Choroidal Thickness in Human Donor Eyes. , 2014, 55, 1352.		77
28	Two-photon polymerization for production of human iPSC-derived retinal cell grafts. Acta Biomaterialia, 2017, 55, 385-395.	4.1	76
29	Restoration of Aqueous Humor Outflow Following Transplantation of iPSC-Derived Trabecular Meshwork Cells in a Transgenic Mouse Model of Glaucoma. , 2017, 58, 2054.		76
30	Duplication of TBK1 Stimulates Autophagy in iPSC-derived Retinal Cells from a Patient with Normal Tension Glaucoma. Journal of Stem Cell Research & Therapy, 2014, 04, 161.	0.3	75
31	Basal exon skipping and genetic pleiotropy: A predictive model of disease pathogenesis. Science Translational Medicine, 2015, 7, 291ra97.	5.8	73
32	Robust cell integration from co-transplantation of biodegradable MMP2-PLGA microspheres with retinal progenitor cells. Biomaterials, 2011, 32, 1041-1050.	5.7	70
33	Growth kinetics and transplantation of human retinal progenitor cells. Experimental Eye Research, 2009, 89, 301-310.	1.2	66
34	Src and FAK are key early signalling intermediates required for neurite growth in NGF-responsive adult DRG neurons. Cellular Signalling, 2008, 20, 241-257.	1.7	65
35	Hypomorphic mutations inTRNT1cause retinitis pigmentosa with erythrocytic microcytosis. Human Molecular Genetics, 2016, 25, 44-56.	1.4	64
36	CRISPR-Cas9 genome engineering: Treating inherited retinal degeneration. Progress in Retinal and Eye Research, 2018, 65, 28-49.	7.3	64

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37	Induction of Trabecular Meshwork Cells From Induced Pluripotent Stem Cells. , 2014, 55, 7065.		61
38	PyMINEr Finds Gene and Autocrine-Paracrine Networks from Human Islet scRNA-Seq. Cell Reports, 2019, 26, 1951-1964.e8.	2.9	61
39	Stem cells for investigation and treatment of inherited retinal disease. Human Molecular Genetics, 2014, 23, R9-R16.	1.4	59
40	Laminin and growth factor receptor activation stimulates differential growth responses in subpopulations of adult DRG neurons. European Journal of Neuroscience, 2006, 24, 676-690.	1.2	56
41	Integrin activation and neurotrophin signaling cooperate to enhance neurite outgrowth in sensory neurons. Journal of Comparative Neurology, 2005, 486, 267-280.	0.9	53
42	Assessment of Adeno-Associated Virus Serotype Tropism in Human Retinal Explants. Human Gene Therapy, 2018, 29, 424-436.	1.4	53
43	MÃ¼ller cell activation, proliferation and migration following laser injury. Molecular Vision, 2009, 15, 1886-96.	1.1	52
44	Mechanical properties of murine and porcine ocular tissues in compression. Experimental Eye Research, 2014, 121, 194-199.	1.2	51
45	Selective accumulation of the complement membrane attack complex in aging choriocapillaris. Experimental Eye Research, 2016, 146, 393-397.	1.2	51
46	Effect of Molecular Weight and Functionality on Acrylated Poly(caprolactone) for Stereolithography and Biomedical Applications. Biomacromolecules, 2018, 19, 3682-3692.	2.6	51
47	Two-photon polymerized poly(caprolactone) retinal cell delivery scaffolds and their systemic and retinal biocompatibility. Acta Biomaterialia, 2019, 94, 204-218.	4.1	51
48	Elevated MMP Expression in the MRL Mouse Retina Creates a Permissive Environment for Retinal Regeneration. , 2008, 49, 1686.		49
49	Allogenic iPSC-derived RPE cell transplants induce immune response in pigs: a pilot study. Scientific Reports, 2015, 5, 11791.	1.6	48
50	Choriocapillaris Degeneration in Geographic Atrophy. American Journal of Pathology, 2019, 189, 1473-1480.	1.9	48
51	Molecular response of chorioretinal endothelial cells to complement injury: implications for macular degeneration. Journal of Pathology, 2016, 238, 446-456.	2.1	47
52	Spectacle: An interactive resource for ocular single-cell RNA sequencing data analysis. Experimental Eye Research, 2020, 200, 108204.	1.2	47
53	Feeder-free differentiation of cells exhibiting characteristics of corneal endothelium from human induced pluripotent stem cells. Biology Open, 2018, 7, .	0.6	46
54	Patient-specific induced pluripotent stem cells to evaluate the pathophysiology of TRNT1 -associated Retinitis pigmentosa. Stem Cell Research, 2017, 21, 58-70.	0.3	45

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55	Controlled drug delivery from 3D printed two-photon polymerized poly(ethylene glycol) dimethacrylate devices. International Journal of Pharmaceutics, 2018, 552, 217-224.	2.6	45
56	Peripheral Sensory Axon Growth: From Receptor Binding to Cellular Signaling. Canadian Journal of Neurological Sciences, 2008, 35, 551-566.	0.3	44
57	Enhanced Differentiation and Delivery of Mouse Retinal Progenitor Cells Using a Micropatterned Biodegradable Thin-Film Polycaprolactone Scaffold. Tissue Engineering - Part A, 2015, 21, 1247-1260.	1.6	44
58	Low-Oxygen Culture Conditions Extend the Multipotent Properties of Human Retinal Progenitor Cells. Tissue Engineering - Part A, 2014, 20, 1465-1475.	1.6	43
59	Monomeric C-reactive protein and inflammation in age-related macular degeneration. Journal of Pathology, 2016, 240, 173-183.	2.1	43
60	Neuronal Differentiation of Induced Pluripotent Stem Cells on Surfactant Templated Chitosan Hydrogels. Biomacromolecules, 2016, 17, 1684-1695.	2.6	38
61	Generating iPSC-Derived Choroidal Endothelial Cells to Study Age-Related Macular Degeneration. , 2015, 56, 8258.		36
62	Combining chondroitinase ABC and growth factors promotes the integration of murine retinal progenitor cells transplanted into Rho(-/-) mice. Molecular Vision, 2011, 17, 1759-70.	1.1	36
63	Human iPSC Modeling Reveals Mutation-Specific Responses to Gene Therapy in a Genotypically Diverse Dominant Maculopathy. American Journal of Human Genetics, 2020, 107, 278-292.	2.6	35
64	Single-Cell RNA Sequencing in Human Retinal Degeneration Reveals Distinct Glial Cell Populations. Cells, 2020, 9, 438.	1.8	35
65	Disruption of RPGR protein interaction network is the common feature of RPGR missense variations that cause XLRP. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1353-1360.	3.3	34
66	Bulk and single-cell gene expression analyses reveal aging human choriocapillaris has pro-inflammatory phenotype. Microvascular Research, 2020, 131, 104031.	1.1	34
67	Using patient-specific induced pluripotent stem cells to interrogate the pathogenicity of a novel retinal pigment epithelium-specific 65ÂkDa cryptic splice site mutation and confirm eligibility for enrollment into a clinical gene augmentation trial. Translational Research, 2015, 166, 740-749.e1.	2.2	30
68	Connective Tissue Growth Factor Promotes Efficient Generation of Human Induced Pluripotent Stem Cell-Derived Choroidal Endothelium. Stem Cells Translational Medicine, 2017, 6, 1533-1546.	1.6	30
69	Wide-Field Swept-Source OCT and Angiography in X-Linked Retinoschisis. Ophthalmology Retina, 2019, 3, 178-185.	1.2	30
70	Using Patient-Specific Induced Pluripotent Stem Cells and Wild-Type Mice to Develop a Gene Augmentation-Based Strategy to Treat CLN3-Associated Retinal Degeneration. Human Gene Therapy, 2016, 27, 835-846.	1.4	29
71	Retinal Tropism and Transduction of Adeno-Associated Virus Varies by Serotype and Route of Delivery (Intravitreal, Subretinal, or Suprachoroidal) in Rats. Human Gene Therapy, 2020, 31, 1288-1299.	1.4	28
72	Correction of NR2E3 Associated Enhanced S-cone Syndrome Patient-specific iPSCs using CRISPR-Cas9. Genes, 2019, 10, 278.	1.0	27

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73	Choroidal endothelial and macrophage gene expression in atrophic and neovascular macular degeneration. Human Molecular Genetics, 2022, 31, 2406-2423.	1.4	26
74	Is Age-Related Macular Degeneration a Microvascular Disease?. Advances in Experimental Medicine and Biology, 2014, 801, 283-289.	0.8	25
75	CRISPRâ€Cas9â€Based Genome Editing of Human Induced Pluripotent Stem Cells. Current Protocols in Stem Cell Biology, 2018, 44, 5B.7.1-5B.7.22.	3.0	25
76	A procedure for selecting and culturing subpopulations of neurons from rat dorsal root ganglia using magnetic beads. Brain Research Protocols, 2005, 16, 50-57.	1.7	24
77	Single-cell RNA sequencing in vision research: Insights into human retinal health and disease. Progress in Retinal and Eye Research, 2021, 83, 100934.	7.3	24
78	Preservation of biological activity of glial cell line-derived neurotrophic factor (GDNF) after microencapsulation and sterilization by gamma irradiation. International Journal of Pharmaceutics, 2012, 436, 545-554.	2.6	23
79	Loss of CD34 Expression in Aging Human Choriocapillaris Endothelial Cells. PLoS ONE, 2014, 9, e86538.	1.1	23
80	Natural History of Cone Disease in the Murine Model of Leber Congenital Amaurosis Due to CEP290 Mutation: Determining the Timing and Expectation of Therapy. PLoS ONE, 2014, 9, e92928.	1.1	23
81	Optimizing Donor Cellular Dissociation and Subretinal Injection Parameters for Stem Cell-Based Treatments. Stem Cells Translational Medicine, 2019, 8, 797-809.	1.6	21
82	Twoâ€Photon Polymerization as a Tool for Studying 3D Printed Topographyâ€Induced Stem Cell Fate. Macromolecular Bioscience, 2019, 19, e1800370.	2.1	21
83	Concise Review: Patient-Specific Stem Cells to Interrogate Inherited Eye Disease. Stem Cells Translational Medicine, 2016, 5, 132-140.	1.6	19
84	Preparation and evaluation of human choroid extracellular matrix scaffolds for the study of cell replacement strategies. Acta Biomaterialia, 2017, 57, 293-303.	4.1	19
85	Helper-Dependent Adenovirus Transduces the Human and Rat Retina but Elicits an Inflammatory Reaction When Delivered Subretinally in Rats. Human Gene Therapy, 2019, 30, 1371-1384.	1.4	19
86	Stepwise differentiation and functional characterization of human induced pluripotent stem cell-derived choroidal endothelial cells. Stem Cell Research and Therapy, 2020, 11, 409.	2.4	19
87	Generation of an immortalized human choroid endothelial cell line (iChEC-1) using an endothelial cell specific promoter. Microvascular Research, 2019, 123, 50-57.	1.1	18
88	Pharmacokinetics of intravitreal glial cell line-derived neurotrophic factor: Experimental studies in pigs. Experimental Eye Research, 2010, 91, 890-895.	1.2	17
89	Differentiation of Induced Pluripotent Stem Cells to Neural Retinal Precursor Cells on Porous Poly-Lactic-co-Glycolic Acid Scaffolds. Journal of Ocular Pharmacology and Therapeutics, 2016, 32, 310-316.	0.6	17
90	Human photoreceptor cells from different macular subregions have distinct transcriptional profiles. Human Molecular Genetics, 2021, 30, 1543-1558.	1.4	17

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91	Gene Therapy Using Stem Cells. Cold Spring Harbor Perspectives in Medicine, 2015, 5, a017434-a017434.	2.9	16
92	Development of a Molecularly Stable Gene Therapy Vector for the Treatment of RPGR-Associated X-Linked Retinitis Pigmentosa. Human Gene Therapy, 2019, 30, 967-974.	1.4	16
93	Development of High-Resolution Three-Dimensional-Printed Extracellular Matrix Scaffolds and Their Compatibility with Pluripotent Stem Cells and Early Retinal Cells. Journal of Ocular Pharmacology and Therapeutics, 2020, 36, 42-55.	0.6	16
94	Patient derived stem cells for discovery and validation of novel pathogenic variants in inherited retinal disease. Progress in Retinal and Eye Research, 2021, 83, 100918.	7.3	16
95	Photoreceptor Cells With Profound Structural Deficits Can Support Useful Vision in Mice. , 2014, 55, 1859.		15
96	Generation of Xenoâ€Free, cGMPâ€Compliant Patientâ€Specific iPSCs from Skin Biopsy. Current Protocols in Stem Cell Biology, 2017, 42, 4A.12.1-4A.12.14.	3.0	15
97	CRISPR-Cas9-Mediated Correction of the 1.02â€‰kb Common Deletion in CLN3 in Induced Pluripotent Stem Cells from Patients with Batten Disease. CRISPR Journal, 2018, 1, 75-87.	1.4	15
98	Retinal Pigment Epithelium and MÃ¼ller Progenitor Cell Interaction Increase MÃ¼ller Progenitor Cell Expression of PDGFR and Ability to Induce Proliferative Vitreoretinopathy in a Rabbit Model. Stem Cells International, 2012, 2012, 1-6.	1.2	14
99	Evaluation of serum and ocular levels of membrane attack complex and C-reactive protein in CFH-genotyped human donors. Eye, 2018, 32, 1740-1742.	1.1	14
100	Correlation of Optical Coherence Tomography and Retinal Histology in Normal and Pro23His Retinal Degeneration Pig. Translational Vision Science and Technology, 2018, 7, 18.	1.1	13
101	Local factor H production by human choroidal endothelial cells mitigates complement deposition: implications for macular degeneration. Journal of Pathology, 2022, 257, 29-38.	2.1	12
102	Stem Cells as Tools for Studying the Genetics of Inherited Retinal Degenerations. Cold Spring Harbor Perspectives in Medicine, 2015, 5, a017160-a017160.	2.9	11
103	A Method for Sectioning and Immunohistochemical Analysis of Stem Cellâ€“Derived 3â€Ð Organoids. Current Protocols in Stem Cell Biology, 2016, 37, 1C.19.1-1C.19.11.	3.0	11
104	A Safe GDNF and GDNF/BDNF Controlled Delivery System Improves Migration in Human Retinal Pigment Epithelial Cells and Survival in Retinal Ganglion Cells: Potential Usefulness in Degenerative Retinal Pathologies. Pharmaceuticals, 2021, 14, 50.	1.7	9
105	Biocompatibility of Human Induced Pluripotent Stem Cellâ€“Derived Retinal Progenitor Cell Grafts in Immunocompromised Rats. Cell Transplantation, 2022, 31, 096368972211044.	1.2	9
106	Imidazole Compounds for Protecting Choroidal Endothelial Cells from Complement Injury. Scientific Reports, 2018, 8, 13387.	1.6	7
107	Label-free microfluidic enrichment of cancer cells from non-cancer cells in ascites. Scientific Reports, 2021, 11, 18032.	1.6	7
108	687. Therapeutic Correction of an LCA-Causing Splice Defect in the CEP290 Gene by CRISPR/Cas-Mediated Genome Editing. Molecular Therapy, 2015, 23, S273-S274.	3.7	6

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109	Predominance of hyperopia in autosomal dominant Best vitelliform macular dystrophy. British Journal of Ophthalmology, 2022, 106, 522-527.	2.1	6
110	Label-free microfluidic enrichment of photoreceptor cells. Experimental Eye Research, 2020, 199, 108166.	1.2	6
111	Microfluidic processing of stem cells for autologous cell replacement. Stem Cells Translational Medicine, 2021, 10, 1384-1393.	1.6	6
112	The effect of retinal scaffold modulus on performance during surgical handling. Experimental Eye Research, 2021, 207, 108566.	1.2	5
113	Development and biological characterization of a clinical gene transfer vector for the treatment of MAK-associated retinitis pigmentosa. Gene Therapy, 2021, , .	2.3	5
114	Chimeric Helper-Dependent Adenoviruses Transduce Retinal Ganglion Cells and MÃ¼ller Cells in Human Retinal Explants. Journal of Ocular Pharmacology and Therapeutics, 2021, 37, 575-579.	0.6	5
115	Autologous cell replacement: a noninvasive AI approach to clinical release testing. Journal of Clinical Investigation, 2020, 130, 608-611.	3.9	5
116	Correlation of features on OCT with visual acuity and Gass lesion type in Best vitelliform macular dystrophy. BMJ Open Ophthalmology, 2021, 6, e000860.	0.8	5
117	AUTOIMMUNE RETINOPATHY MIMICKING HERITABLE RETINAL DEGENERATION IN A PATIENT WITH COMMON VARIABLE IMMUNE DEFICIENCY. Retinal Cases and Brief Reports, 2022, 16, 111-117.	0.3	4
118	Prevascularized silicon membranes for the enhancement of transport to implanted medical devices. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 1602-1609.	1.6	3
119	Sensitive quantification of m.3243A>G mutational proportion in non-retinal tissues and its relationship with visual symptoms. Human Molecular Genetics, 2021, , .	1.4	3
120	Expression of the retina-specific flippase, ABCA4, in epidermal keratinocytes. F1000Research, 0, 5, 193.	0.8	3
121	Stem Cells in Large Animal Models of Retinal and Neurological Disease. Stem Cells International, 2012, 2012, 1-2.	1.2	2
122	Evaluation of sFLT1 protein levels in human eyes with the FLT1 rs9943922 polymorphism. Ophthalmic Genetics, 2018, 39, 68-72.	0.5	2
123	An Unusual Presentation of CLN3-Associated Batten Disease With Classic Histopathologic and Ultrastructural Findings. Journal of Neuropathology and Experimental Neurology, 2021, 80, 1081-1084.	0.9	2
124	Intrafamilial Variability of Ocular Manifestations of von Hippel-Lindau Disease. Ophthalmology Retina, 2021, 6, 89-89.	1.2	1
125	Tissue engineering for the treatment of age-related macular degeneration. Expert Review of Ophthalmology, 2010, 5, 587-590.	0.3	0
126	Using Stem Cells to Rebuild the Outer Neural Retina. , 2016, 57, 3521.		0

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127	Human Retinal Engineering using 3D PCL Scaffolds. FASEB Journal, 2018, 32, 816.12.	0.2	0
128	Retinal Capillary Hemangioma Leading to a Diagnosis of von Hippel-Lindau Disease in a Patient with Retinopathy of Prematurity. Case Reports in Ophthalmology, 0, , 323-329.	0.3	0