Thomas A Rando

List of Publications by Year
in descending order

134 papers	27,851 citations	12303 69 h-index	13727 129 g-index
146 all docs	146 docs citations	146 times ranked	28896 citing authors

#	Article	IF	Citations
1	Chronic inflammation in the etiology of disease across the life span. Nature Medicine, 2019, 25, 1822-1832.	15.2	2,195
2	Rejuvenation of aged progenitor cells by exposure to a young systemic environment. Nature, 2005, 433, 760-764.	13.7	1,926
3	Geroscience: Linking Aging to Chronic Disease. Cell, 2014, 159, 709-713.	13.5	1,709
4	The ageing systemic milieu negatively regulates neurogenesis and cognitive function. Nature, 2011, 477, 90-94.	13.7	1,453
5	Increased Wnt Signaling During Aging Alters Muscle Stem Cell Fate and Increases Fibrosis. Science, 2007, 317, 807-810.	6.0	1,321
6	Notch-Mediated Restoration of Regenerative Potential to Aged Muscle. Science, 2003, 302, 1575-1577.	6.0	964
7	Molecular regulation of stem cell quiescence. Nature Reviews Molecular Cell Biology, 2013, 14, 329-340.	16.1	912
8	The Regulation of Notch Signaling Controls Satellite Cell Activation and Cell Fate Determination in Postnatal Myogenesis. Developmental Cell, 2002, 3, 397-409.	3.1	779
9	Type 2 Innate Signals Stimulate Fibro/Adipogenic Progenitors to Facilitate Muscle Regeneration. Cell, 2013, 153, 376-388.	13.5	676
10	Stem cells, ageing and the quest for immortality. Nature, 2006, 441, 1080-1086.	13.7	642
11	mTORC1 controls the adaptive transition of quiescent stem cells from G0 to GAlert. Nature, 2014, 510, 393-396.	13.7	599
12	A Temporal Switch from Notch to Wnt Signaling in Muscle Stem Cells Is Necessary for Normal Adult Myogenesis. Cell Stem Cell, 2008, 2, 50-59.	5.2	546
13	Chromatin Modifications as Determinants of Muscle Stem Cell Quiescence and Chronological Aging. Cell Reports, 2013, 4, 189-204.	2.9	463
14	Aging, Rejuvenation, and Epigenetic Reprogramming: Resetting the Aging Clock. Cell, 2012, 148, 46-57.	13.5	460
15	Notch Signaling Is Necessary to Maintain Quiescence in Adult Muscle Stem Cells. Stem Cells, 2012, 30, 232-242.	1.4	447
16	Isolation of Adult Mouse Myogenic Progenitors. Cell, 2004, 119, 543-554.	13.5	446
17	H3K4me3 Breadth Is Linked to Cell Identity and Transcriptional Consistency. Cell, 2014, 158, 673-688.	13.5	404
18	Stem cells in postnatal myogenesis: molecular mechanisms of satellite cell quiescence, activation and replenishment. Trends in Cell Biology, 2005, 15, 666-673.	3.6	396

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19	Maintenance of muscle stem-cell quiescence by microRNA-489. Nature, 2012, 482, 524-528.	13.7	393
20	Collagen VI regulates satellite cell self-renewal and muscle regeneration. Nature Communications, 2013, 4, 1964.	5.8	383
21	Tissue-Specific Stem Cells: Lessons from the Skeletal Muscle Satellite Cell. Cell Stem Cell, 2012, 10, 504-514.	5.2	374
22	Lysosome activation clears aggregates and enhances quiescent neural stem cell activation during aging. Science, 2018, 359, 1277-1283.	6.0	374
23	The dystrophin-glycoprotein complex, cellular signaling, and the regulation of cell survival in the muscular dystrophies. Muscle and Nerve, 2001, 24, 1575-1594.	1.0	330
24	Ageing hallmarks exhibit organ-specific temporal signatures. Nature, 2020, 583, 596-602.	13.7	317
25	Isolation of skeletal muscle stem cells by fluorescence-activated cell sorting. Nature Protocols, 2015, 10, 1612-1624.	5.5	290
26	The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans. Science, 2022, 376, eabl4896.	6.0	289
27	Manifestations and mechanisms of stem cell aging. Journal of Cell Biology, 2011, 193, 257-266.	2.3	281
28	Stem cells and healthy aging. Science, 2015, 350, 1199-1204.	6.0	268
29	Aging, Stem Cells and Tissue Regeneration: Lessons from Muscle. Cell Cycle, 2005, 4, 407-410.	1.3	267
30	A Muscle Stem Cell Support Group: Coordinated Cellular Responses in Muscle Regeneration. Developmental Cell, 2018, 46, 135-143.	3.1	249
31	Emerging models and paradigms for stem cell ageing. Nature Cell Biology, 2011, 13, 506-512.	4.6	240
32	Stem Cell Review Series: Aging of the skeletal muscle stem cell niche. Aging Cell, 2008, 7, 590-598.	3.0	237
33	Induction of autophagy supports the bioenergetic demands of quiescent muscle stem cell activation. EMBO Journal, 2014, 33, 2782-2797.	3.5	235
34	Mesenchymal Stromal Cells Are Required for Regeneration and Homeostatic Maintenance of Skeletal Muscle. Cell Reports, 2019, 27, 2029-2035.e5.	2.9	235
35	High Incidence of Non-Random Template Strand Segregation and Asymmetric Fate Determination In Dividing Stem Cells and their Progeny. PLoS Biology, 2007, 5, e102.	2.6	232
36	Stem Cell Quiescence: Dynamism, Restraint, and Cellular Idling. Cell Stem Cell, 2019, 24, 213-225.	5.2	220

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37	Bioengineered constructs combined with exercise enhance stem cell-mediated treatment of volumetric muscle loss. Nature Communications, 2017, 8, 15613.	5.8	205
38	Heterochronic parabiosis for the study of the effects of aging on stem cells and their niches. Cell Cycle, 2012, 11, 2260-2267.	1.3	198
39	Heterochronic parabiosis: historical perspective and methodological considerations for studies of aging and longevity. Aging Cell, 2013, 12, 525-530.	3.0	198
40	Intrinsic Changes and Extrinsic Influences of Myogenic Stem Cell Function During Aging. Stem Cell Reviews and Reports, 2007, 3, 226-237.	5.6	196
41	Transient non-integrative expression of nuclear reprogramming factors promotes multifaceted amelioration of aging in human cells. Nature Communications, 2020, 11, 1545.	5.8	183
42	Aging of the skeletal muscle extracellular matrix drives a stem cell fibrogenic conversion. Aging Cell, 2017, 16, 518-528.	3.0	172
43	ExÂVivo Expansion and InÂVivo Self-Renewal of Human Muscle Stem Cells. Stem Cell Reports, 2015, 5, 621-632.	2.3	168
44	Translational strategies and challenges in regenerative medicine. Nature Medicine, 2014, 20, 814-821.	15.2	166
45	An artificial niche preserves the quiescence of muscle stem cells and enhances their therapeutic efficacy. Nature Biotechnology, 2016, 34, 752-759.	9.4	165
46	Transcriptional Profiling of Quiescent Muscle Stem Cells InÂVivo. Cell Reports, 2017, 21, 1994-2004.	2.9	165
47	Regulation of Pax3 by Proteasomal Degradation of Monoubiquitinated Protein in Skeletal Muscle Progenitors. Cell, 2007, 130, 349-362.	13.5	160
48	Heterogeneity among muscle precursor cells in adult skeletal muscles with differing regenerative capacities. Developmental Dynamics, 1998, 212, 495-508.	0.8	157
49	FOXO3 Promotes Quiescence in Adult Muscle Stem Cells during the Process of Self-Renewal. Stem Cell Reports, 2014, 2, 414-426.	2.3	156
50	Exercise plasma boosts memory and dampens brain inflammation via clusterin. Nature, 2021, 600, 494-499.	13.7	156
51	The Immortal Strand Hypothesis: Segregation and Reconstruction. Cell, 2007, 129, 1239-1243.	13.5	153
52	FOXO3 Shares Common Targets with ASCL1 Genome-wide and Inhibits ASCL1-Dependent Neurogenesis. Cell Reports, 2013, 4, 477-491.	2.9	139
53	Heterogeneity in the muscle satellite cell population. Seminars in Cell and Developmental Biology, 2010, 21, 845-854.	2.3	138
54	Alternative Polyadenylation Mediates MicroRNA Regulation of Muscle Stem Cell Function. Cell Stem Cell, 2012, 10, 327-336.	5.2	133

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55	Biomarker system for studying muscle, stem cells, and cancer <i>in vivo</i>. FASEB Journal, 2009, 23, 2681-2690.	0.2	125
56	HGFA Is an Injury-Regulated Systemic Factor that Induces the Transition of Stem Cells into GAlert. Cell Reports, 2017, 19, 479-486.	2.9	117
57	Role of nitric oxide in the pathogenesis of muscular dystrophies: A ?two hit? hypothesis of the cause of muscle necrosis. Microscopy Research and Technique, 2001, 55, 223-235.	1.2	114
58	Focal Adhesion Kinase Signaling Regulates the Expression of Caveolin 3 and Î²1 Integrin, Genes Essential for Normal Myoblast Fusion. Molecular Biology of the Cell, 2009, 20, 3422-3435.	0.9	114
59	A Wnt-TGFÎ²2 axis induces a fibrogenic program in muscle stem cells from dystrophic mice. Science Translational Medicine, 2014, 6, 267ra176.	5.8	112
60	Oxidative Stress and the Pathogenesis of Muscular Dystrophies. American Journal of Physical Medicine and Rehabilitation, 2002, 81, S175-S186.	0.7	111
61	Impaired Notch Signaling Leads to a Decrease in p53 Activity and Mitotic Catastrophe in Aged Muscle Stem Cells. Cell Stem Cell, 2018, 23, 544-556.e4.	5.2	107
62	mTORC1 underlies ageâ€related muscle fiber damage and loss by inducing oxidative stress and catabolism. Aging Cell, 2019, 18, e12943.	3.0	104
63	BCL9 is an essential component of canonical Wnt signaling that mediates the differentiation of myogenic progenitors during muscle regeneration. Developmental Biology, 2009, 335, 93-105.	0.9	97
64	Exercise rejuvenates quiescent skeletal muscle stem cells in old mice through restoration of Cyclin D1. Nature Metabolism, 2020, 2, 307-317.	5.1	97
65	Intronic polyadenylation of PDGFRÎ± in resident stem cells attenuates muscle fibrosis. Nature, 2016, 540, 276-279.	13.7	93
66	Macrophage-released ADAMTS1 promotes muscle stem cell activation. Nature Communications, 2017, 8, 669.	5.8	89
67	Focal adhesion kinase is essential for costamerogenesis in cultured skeletal muscle cells. Developmental Biology, 2006, 293, 38-52.	0.9	88
68	Lineage of origin in rhabdomyosarcoma informs pharmacological response. Genes and Development, 2014, 28, 1578-1591.	2.7	87
69	mTORC1 Activation during Repeated Regeneration Impairs Somatic Stem Cell Maintenance. Cell Stem Cell, 2017, 21, 806-818.e5.	5.2	87
70	Staufen1 inhibits MyoD translation to actively maintain muscle stem cell quiescence. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8996-E9005.	3.3	70
71	Regenerative Rehabilitation: Applied Biophysics Meets Stem Cell Therapeutics. Cell Stem Cell, 2018, 22, 306-309.	5.2	65
72	Myf5 expression during fetal myogenesis defines the developmental progenitors of adult satellite cells. Developmental Biology, 2013, 379, 195-207.	0.9	64

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73	Treatment of volumetric muscle loss in mice using nanofibrillar scaffolds enhances vascular organization and integration. Communications Biology, 2019, 2, 170.	2.0	64
74	Interaction between epigenetic and metabolism in aging stem cells. Current Opinion in Cell Biology, 2017, 45, 1-7.	2.6	62
75	Dystrophin mutations predict cellular susceptibility to oxidative stress. , 2000, 23, 784-792.		59
76	Stem cell therapy for muscular dystrophies. Journal of Clinical Investigation, 2020, 130, 5652-5664.	3.9	58
77	Overexpression of copper/zinc superoxide dismutase: A novel cause of murine muscular dystrophy. Annals of Neurology, 1998, 44, 381-386.	2.8	54
78	Inhibition of Methyltransferase Setd7 Allows the InÂVitro Expansion of Myogenic Stem Cells with Improved Therapeutic Potential. Cell Stem Cell, 2018, 22, 177-190.e7.	5.2	54
79	The protein tyrosine phosphatase 1B inhibitor MSI-1436 stimulates regeneration of heart and multiple other tissues. Npj Regenerative Medicine, 2017, 2, 4.	2.5	53
80	Alternative polyadenylation of Pax3 controls muscle stem cell fate and muscle function. Science, 2019, 366, 734-738.	6.0	53
81	Asynchronous, contagious and digital aging. Nature Aging, 2021, 1, 29-35.	5.3	51
82	Rehabilitative exercise and spatially patterned nanofibrillar scaffolds enhance vascularization and innervation following volumetric muscle loss. Npj Regenerative Medicine, 2018, 3, 16.	2.5	47
83	The place of genetics in ageing research. Nature Reviews Genetics, 2012, 13, 589-594.	7.7	43
84	Synergizing Engineering and Biology to Treat and Model Skeletal Muscle Injury and Disease. Annual Review of Biomedical Engineering, 2015, 17, 217-242.	5.7	43
85	Adult stem cells and regenerative medicineâ€"a symposium report. Annals of the New York Academy of Sciences, 2020, 1462, 27-36.	1.8	43
86	From stem to stern. Nature, 2007, 449, 288-291.	13.7	39
87	Electrical stimulation of human neural stem cells via conductive polymer nerve guides enhances peripheral nerve recovery. Biomaterials, 2021, 275, 120982.	5.7	39
88	Stem cell ageing and non-random chromosome segregation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 85-93.	1.8	38
89	Taf1 Regulates Pax3 Protein by Monoubiquitination in Skeletal Muscle Progenitors. Molecular Cell, 2010, 40, 749-761.	4.5	36
90	The JAK-STAT Pathway Is Critical in Ventilator-Induced Diaphragm Dysfunction. Molecular Medicine, 2014, 20, 579-589.	1.9	34

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91	Functional redundancy of type I and type II receptors in the regulation of skeletal muscle growth by myostatin and activin A. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30907-30917.	3.3	33
92	Stem Cells as Vehicles for Youthful Regeneration of Aged Tissues. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2014, 69, S39-S42.	1.7	32
93	ARDD 2020: from aging mechanisms to interventions. Aging, 2020, 12, 24484-24503.	1.4	32
94	Cells, scaffolds, and bioactive factors: Engineering strategies for improving regeneration following volumetric muscle loss. Biomaterials, 2021, 278, 121173.	5.7	31
95	Targeting microRNA-mediated gene repression limits adipogenic conversion of skeletal muscle mesenchymal stromal cells. Cell Stem Cell, 2021, 28, 1323-1334.e8.	5.2	30
96	Enhanced gene repair mediated by methyl-CpG-modified single-stranded oligonucleotides. Nucleic Acids Research, 2009, 37, 7468-7482.	6.5	27
97	Non-viral gene therapy for Duchenne muscular dystrophy: Progress and challenges. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2007, 1772, 263-271.	1.8	24
98	Deltex2 represses MyoD expression and inhibits myogenic differentiation by acting as a negative regulator of Jmjd1c. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E3071-E3080.	3.3	24
99	Biomechanics show stem cell necessity for effective treatment of volumetric muscle loss using bioengineered constructs. Npj Regenerative Medicine, 2018, 3, 18.	2.5	24
100	Taking the Next Steps in Regenerative Rehabilitation: Establishment of a New Interdisciplinary Field. Archives of Physical Medicine and Rehabilitation, 2020, 101, 917-923.	0.5	24
101	Regeneration, Rejuvenation, and Replacement: Turning Back the Clock on Tissue Aging. Cold Spring Harbor Perspectives in Biology, 2021, 13, a040907.	2.3	24
102	Fasting induces a highly resilient deep quiescent state in muscle stem cells via ketone body signaling. Cell Metabolism, 2022, 34, 902-918.e6.	7.2	24
103	Honey bee Royalactin unlocks conserved pluripotency pathway in mammals. Nature Communications, 2018, 9, 5078.	5.8	22
104	Bioengineered Viral Platform for Intramuscular Passive Vaccine Delivery to Human Skeletal Muscle. Molecular Therapy - Methods and Clinical Development, 2018, 10, 144-155.	1.8	21
105	The mortal strand hypothesis: Non-random chromosome inheritance and the biased segregation of damaged DNA. Seminars in Cell and Developmental Biology, 2013, 24, 653-660.	2.3	16
106	Transplantation of insulin-like growth factor-1 laden scaffolds combined with exercise promotes neuroregeneration and angiogenesis in a preclinical muscle injury model. Biomaterials Science, 2020, 8, 5376-5389.	2.6	16
107	Angiotensin receptor blockade mimics the effect of exercise on recovery after orthopaedic trauma by decreasing pain and improving muscle regeneration. Journal of Physiology, 2020, 598, 317-329.	1.3	15
108	Computational modeling of malignant ascites reveals CCL5â€“SDC4 interaction in the immune microenvironment of ovarian cancer. Molecular Carcinogenesis, 2021, 60, 297-312.	1.3	15

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109	Copper/zinc superoxide dismutase: More is not necessarily better!. Annals of Neurology, 1999, 46, 135-136.	2.8	14
110	Oligonucleotide-mediated gene therapy for muscular dystrophies. Neuromuscular Disorders, 2002, 12, S55-S60.	0.3	14
111	Assessment of disease activity in muscular dystrophies by noninvasive imaging. Journal of Clinical Investigation, 2013, 123, 2298-2305.	3.9	14
112	The adult muscle stem cell comes of age. Nature Medicine, 2005, 11, 829-831.	15.2	13
113	Tubastatin A maintains adult skeletal muscle stem cells in a quiescent state exÂvivo and improves their engraftment ability inÂvivo. Stem Cell Reports, 2022, 17, 82-95.	2.3	12
114	Alive and well? Exploring disease by studying lifespan. Current Opinion in Genetics and Development, 2014, 26, 33-40.	1.5	11
115	Hairless regulates heterochromatin maintenance and muscle stem cell function as a histone demethylase antagonist. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	8
116	Mimicking the niche: cytokines expand muscle stem cells. Cell Research, 2015, 25, 761-762.	5.7	7
117	The regenerative rehabilitation collection: a forum for an emerging field. Npj Regenerative Medicine, 2018, 3, 20.	2.5	7
118	Comparative Effects of Basic Fibroblast Growth Factor Delivery or Voluntary Exercise on Muscle Regeneration after Volumetric Muscle Loss. Bioengineering, 2022, 9, 37.	1.6	7
119	RNA-binding proteins direct myogenic cell fate decisions. ELife, 0, 11, .	2.8	7
120	The Ins and Outs of Aging and Longevity. Annual Review of Physiology, 2013, 75, 617-619.	5.6	6
121	Monitoring disease activity noninvasively in the <i>mdx</i> model of Duchenne muscular dystrophy. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7741-7746.	3.3	5
122	Context-dependent modulation of aggressiveness of pediatric tumors by individual oncogenic RAS isoforms. Oncogene, 2021, 40, 4955-4966.	2.6	5
123	Heterogeneity among muscle precursor cells in adult skeletal muscles with differing regenerative capacities. , 1998, 212, 495.		5
124	Age-Dependent Changes in Skeletal MuscleRegeneration. , 2008, , 359-374.		5
125	Overexpression of thioredoxinâ€2 attenuates ageâ€related muscle loss by suppressing mitochondrial oxidative stress and apoptosis. JCSM Rapid Communications, 2022, 5, 130-145.	0.6	5
126	Artificial Sweeteners â€" Enhancing Glycosylation to Treat Muscular Dystrophies. New England Journal of Medicine, 2004, 351, 1254-1256.	13.9	4

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127	Meeting Report: Aging Research and Drug Discovery. Aging, 2022, 14, 530-543.	1.4	4
128	ATR activity controls stem cell quiescence via the cyclin Fâ€"SCF complex. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2115638119.	3.3	4
129	Turning Back Time: Reversing Tissue Pathology to Enhance Stem Cell Engraftment. Cell Stem Cell, 2008, 3, 232-234.	5.2	2
130	Aging of Stem Cells. , 2011, , 141-161.		2
131	Of fish and men. Nature Chemical Biology, 2014, 10, 91-92.	3.9	2
132	Tissue ageing: Do insights into molecular mechanisms of ageing lead to new therapeutic strategies?. Experimental Gerontology, 2008, 43, 603-604.	1.2	1
133	A Sexy Spin on Nonrandom Chromosome Segregation. Cell Stem Cell, 2013, 12, 641-643.	5.2	0
134	Fleeting factors, turning back time. Nature Biotechnology, 2017, 35, 218-220.	9.4	0