Thomas A Rando

List of Publications by Citations

127 papers	19,837 citations	63 h-index	140 g-index
146 ext. papers	24,303 ext. citations	18.7 avg, IF	7.21 L-index

#	Paper	IF	Citations
127	Rejuvenation of aged progenitor cells by exposure to a young systemic environment. *Nature*, **2005**, 433, 760-4	50.4	1642
126	Increased Wnt signaling during aging alters muscle stem cell fate and increases fibrosis. *Science*, **2007**, 317, 807-10	33.3	1124
125	The ageing systemic milieu negatively regulates neurogenesis and cognitive function. *Nature*, **2011**, 477, 90-4	50.4	1119
124	Geroscience: linking aging to chronic disease. *Cell*, **2014**, 159, 709-13	56.2	1068
123	Notch-mediated restoration of regenerative potential to aged muscle. *Science*, **2003**, 302, 1575-7	33.3	833
122	Chronic inflammation in the etiology of disease across the life span. *Nature Medicine*, **2019**, 25, 1822-1832	50.5	830
121	Molecular regulation of stem cell quiescence. *Nature Reviews Molecular Cell Biology*, **2013**, 14, 329-40	48.7	718
120	The regulation of Notch signaling controls satellite cell activation and cell fate determination in postnatal myogenesis. *Developmental Cell*, **2002**, 3, 397-409	10.2	695
119	Stem cells, ageing and the quest for immortality. *Nature*, **2006**, 441, 1080-6	50.4	568
118	Type 2 innate signals stimulate fibro/adipogenic progenitors to facilitate muscle regeneration. *Cell*, **2013**, 153, 376-88	56.2	491
117	A temporal switch from notch to Wnt signaling in muscle stem cells is necessary for normal adult myogenesis. *Cell Stem Cell*, **2008**, 2, 50-9	18	441
116	Isolation of adult mouse myogenic progenitors: functional heterogeneity of cells within and engrafting skeletal muscle. *Cell*, **2004**, 119, 543-54	56.2	408
115	mTORC1 controls the adaptive transition of quiescent stem cells from G0 to G(Alert). *Nature*, **2014**, 510, 393-6	50.4	406
114	Notch signaling is necessary to maintain quiescence in adult muscle stem cells. *Stem Cells*, **2012**, 30, 232-42	5.8	352
113	Chromatin modifications as determinants of muscle stem cell quiescence and chronological aging. *Cell Reports*, **2013**, 4, 189-204	10.6	348
112	Stem cells in postnatal myogenesis: molecular mechanisms of satellite cell quiescence, activation and replenishment. *Trends in Cell Biology*, **2005**, 15, 666-73	18.3	347
111	Aging, rejuvenation, and epigenetic reprogramming: resetting the aging clock. *Cell*, **2012**, 148, 46-57	56.2	345

110	Maintenance of muscle stem-cell quiescence by microRNA-489. *Nature*, **2012**, 482, 524-8	50.4	339
109	Tissue-specific stem cells: lessons from the skeletal muscle satellite cell. *Cell Stem Cell*, **2012**, 10, 504-14	18	309
108	The dystrophin-glycoprotein complex, cellular signaling, and the regulation of cell survival in the muscular dystrophies. *Muscle and Nerve*, **2001**, 24, 1575-94	3.4	295
107	Collagen VI regulates satellite cell self-renewal and muscle regeneration. *Nature Communications*, **2013**, 4, 1964	17.4	286
106	H3K4me3 breadth is linked to cell identity and transcriptional consistency. *Cell*, **2014**, 158, 673-88	56.2	278
105	Manifestations and mechanisms of stem cell aging. *Journal of Cell Biology*, **2011**, 193, 257-66	7.3	241
104	Aging, stem cells and tissue regeneration: lessons from muscle. *Cell Cycle*, **2005**, 4, 407-10	4.7	238
103	Lysosome activation clears aggregates and enhances quiescent neural stem cell activation during aging. *Science*, **2018**, 359, 1277-1283	33.3	222
102	Stem cell review series: aging of the skeletal muscle stem cell niche. *Aging Cell*, **2008**, 7, 590-8	9.9	212
101	High incidence of non-random template strand segregation and asymmetric fate determination in dividing stem cells and their progeny. *PLoS Biology*, **2007**, 5, e102	9.7	205
100	Emerging models and paradigms for stem cell ageing. *Nature Cell Biology*, **2011**, 13, 506-12	23.4	202
99	Stem cells and healthy aging. *Science*, **2015**, 350, 1199-204	33.3	181
98	Intrinsic changes and extrinsic influences of myogenic stem cell function during aging. *Stem Cell Reviews and Reports*, **2007**, 3, 226-37	6.4	177
97	Isolation of skeletal muscle stem cells by fluorescence-activated cell sorting. *Nature Protocols*, **2015** , 10, 1612-24	18.8	174
96	Induction of autophagy supports the bioenergetic demands of quiescent muscle stem cell activation. *EMBO Journal*, **2014**, 33, 2782-97	13	172
95	Heterochronic parabiosis for the study of the effects of aging on stem cells and their niches. *Cell Cycle*, **2012**, 11, 2260-7	4.7	157
94	Regulation of Pax3 by proteasomal degradation of monoubiquitinated protein in skeletal muscle progenitors. *Cell*, **2007**, 130, 349-62	56.2	146
93	A Muscle Stem Cell Support Group: Coordinated Cellular Responses in Muscle Regeneration. *Developmental Cell*, **2018**, 46, 135-143	10.2	145

92	Heterochronic parabiosis: historical perspective and methodological considerations for studies of aging and longevity. *Aging Cell*, **2013**, 12, 525-30	9.9	145
91	Heterogeneity among muscle precursor cells in adult skeletal muscles with differing regenerative capacities. *Developmental Dynamics*, **1998**, 212, 495-508	2.9	141
90	The immortal strand hypothesis: segregation and reconstruction. *Cell*, **2007**, 129, 1239-43	56.2	134
89	Bioengineered constructs combined with exercise enhance stem cell-mediated treatment of volumetric muscle loss. *Nature Communications*, **2017**, 8, 15613	17.4	129
88	Translational strategies and challenges in regenerative medicine. *Nature Medicine*, **2014**, 20, 814-21	50.5	127
87	An artificial niche preserves the quiescence of muscle stem cells and enhances their therapeutic efficacy. *Nature Biotechnology*, **2016**, 34, 752-9	44.5	125
86	Ex Vivo Expansion and In Vivo Self-Renewal of Human Muscle Stem Cells. *Stem Cell Reports*, **2015**, 5, 621-32	8	122
85	Heterogeneity in the muscle satellite cell population. *Seminars in Cell and Developmental Biology*, **2010**, 21, 845-54	7.5	119
84	FOXO3 promotes quiescence in adult muscle stem cells during the process of self-renewal. *Stem Cell Reports*, **2014**, 2, 414-26	8	114
83	Alternative polyadenylation mediates microRNA regulation of muscle stem cell function. *Cell Stem Cell*, **2012**, 10, 327-36	18	113
82	Biomarker system for studying muscle, stem cells, and cancer in vivo. *FASEB Journal*, **2009**, 23, 2681-90	0.9	111
81	FOXO3 shares common targets with ASCL1 genome-wide and inhibits ASCL1-dependent neurogenesis. *Cell Reports*, **2013**, 4, 477-91	10.6	109
80	Transcriptional Profiling of Quiescent Muscle Stem Cells In Vivo. *Cell Reports*, **2017**, 21, 1994-2004	10.6	108
79	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, 223-35	2.8	106
78	Aging of the skeletal muscle extracellular matrix drives a stem cell fibrogenic conversion. *Aging Cell* , **2017**, 16, 518-528	9.9	104
77	Oxidative stress and the pathogenesis of muscular dystrophies. *American Journal of Physical Medicine and Rehabilitation*, **2002**, 81, S175-86	2.6	101
76	Stem Cell Quiescence: Dynamism, Restraint, and Cellular Idling. *Cell Stem Cell*, **2019**, 24, 213-225	18	100
75	Mesenchymal Stromal Cells Are Required for Regeneration and Homeostatic Maintenance of Skeletal Muscle. *Cell Reports*, **2019**, 27, 2029-2035.e5	10.6	99

74	Focal adhesion kinase signaling regulates the expression of caveolin 3 and beta1 integrin, genes essential for normal myoblast fusion. *Molecular Biology of the Cell*, **2009**, 20, 3422-35	3.5	92
73	A Wnt-TGF□ axis induces a fibrogenic program in muscle stem cells from dystrophic mice. *Science Translational Medicine*, **2014**, 6, 267ra176	17.5	83
72	Ageing hallmarks exhibit organ-specific temporal signatures. *Nature*, **2020**, 583, 596-602	50.4	82
71	Focal adhesion kinase is essential for costamerogenesis in cultured skeletal muscle cells. *Developmental Biology*, **2006**, 293, 38-52	3.1	81
70	Transient non-integrative expression of nuclear reprogramming factors promotes multifaceted amelioration of aging in human cells. *Nature Communications*, **2020**, 11, 1545	17.4	77
69	Intronic polyadenylation of PDGFR□n resident stem cells attenuates muscle fibrosis. *Nature*, **2016**, 540, 276-279	50.4	72
68	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	3.1	72
67	HGFA Is an Injury-Regulated Systemic Factor that Induces the Transition of Stem Cells into G. *Cell Reports*, **2017**, 19, 479-486	10.6	71
66	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	18	65
65	Lineage of origin in rhabdomyosarcoma informs pharmacological response. *Genes and Development* , **2014**, 28, 1578-91	12.6	64
64	Macrophage-released ADAMTS1 promotes muscle stem cell activation. *Nature Communications*, **2017**, 8, 669	17.4	58
63	mTORC1 Activation during Repeated Regeneration Impairs Somatic Stem Cell Maintenance. *Cell Stem Cell*, **2017**, 21, 806-818.e5	18	57
62	mTORC1 underlies age-related muscle fiber damage and loss by inducing oxidative stress and catabolism. *Aging Cell*, **2019**, 18, e12943	9.9	52
61	Dystrophin mutations predict cellular susceptibility to oxidative stress. *Muscle and Nerve*, **2000**, 23, 784-92	3.4	50
60	Overexpression of copper/zinc superoxide dismutase: a novel cause of murine muscular dystrophy. *Annals of Neurology*, **1998**, 44, 381-6	9.4	49
59	Myf5 expression during fetal myogenesis defines the developmental progenitors of adult satellite cells. *Developmental Biology*, **2013**, 379, 195-207	3.1	48
58	Treatment of volumetric muscle loss in mice using nanofibrillar scaffolds enhances vascular organization and integration. *Communications Biology*, **2019**, 2, 170	6.7	41
57	Interaction between epigenetic and metabolism in aging stem cells. *Current Opinion in Cell Biology*, **2017**, 45, 1-7	9	40

56	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	11.5	40
55	The protein tyrosine phosphatase 1B inhibitor MSI-1436 stimulates regeneration of heart and multiple other tissues. *Npj Regenerative Medicine*, **2017**, 2, 4	15.8	39
54	Regenerative Rehabilitation: Applied Biophysics Meets Stem Cell Therapeutics. *Cell Stem Cell*, **2018**, 22, 306-309	18	39
53	Synergizing Engineering and Biology to Treat and Model Skeletal Muscle Injury and Disease. *Annual Review of Biomedical Engineering*, **2015**, 17, 217-42	12	38
52	The place of genetics in ageing research. *Nature Reviews Genetics*, **2012**, 13, 589-94	30.1	36
51	Taf1 regulates Pax3 protein by monoubiquitination in skeletal muscle progenitors. *Molecular Cell*, **2010**, 40, 749-61	17.6	34
50	Inhibition of Methyltransferase Setd7 Allows the In Vitro Expansion of Myogenic Stem Cells with Improved Therapeutic Potential. *Cell Stem Cell*, **2018**, 22, 177-190.e7	18	33
49	Exercise rejuvenates quiescent skeletal muscle stem cells in old mice through restoration of Cyclin D1. *Nature Metabolism*, **2020**, 2, 307-317	14.6	32
48	Stem cell ageing and non-random chromosome segregation. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2011**, 366, 85-93	5.8	32
47	Rehabilitative exercise and spatially patterned nanofibrillar scaffolds enhance vascularization and innervation following volumetric muscle loss. *Npj Regenerative Medicine*, **2018**, 3, 16	15.8	32
46	Stem cells as vehicles for youthful regeneration of aged tissues. *Journals of Gerontology - Series A Biological Sciences and Medical Sciences*, **2014**, 69 Suppl 1, S39-42	6.4	29
45	The JAK-STAT pathway is critical in ventilator-induced diaphragm dysfunction. *Molecular Medicine*, **2015**, 20, 579-89	6.2	28
44	Alternative polyadenylation of Pax3 controls muscle stem cell fate and muscle function. *Science*, **2019**, 366, 734-738	33.3	27
43	Enhanced gene repair mediated by methyl-CpG-modified single-stranded oligonucleotides. *Nucleic Acids Research*, **2009**, 37, 7468-82	20.1	26
42	Stem cell therapy for muscular dystrophies. *Journal of Clinical Investigation*, **2020**, 130, 5652-5664	15.9	25
41	Adult stem cells and regenerative medicine-a symposium report. *Annals of the New York Academy of Sciences*, **2020**, 1462, 27-36	6.5	20
40	Non-viral gene therapy for Duchenne muscular dystrophy: progress and challenges. *Biochimica Et Biophysica Acta - Molecular Basis of Disease*, **2007**, 1772, 263-71	6.9	18
39	Taking the Next Steps in Regenerative Rehabilitation: Establishment of a New Interdisciplinary Field. *Archives of Physical Medicine and Rehabilitation*, **2020**, 101, 917-923	2.8	15

38	The mortal strand hypothesis: non-random chromosome inheritance and the biased segregation of damaged DNA. *Seminars in Cell and Developmental Biology*, **2013**, 24, 653-60	7.5	15
37	Exercise plasma boosts memory and dampens brain inflammation via clusterin. *Nature*, **2021**,	50.4	15
36	Biomechanics show stem cell necessity for effective treatment of volumetric muscle loss using bioengineered constructs. *Npj Regenerative Medicine*, **2018**, 3, 18	15.8	15
35	The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans.. *Science*, **2022**, 376, eabl4896	33.3	15
34	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	11.5	14
33	Copper/zinc superoxide dismutase: More is not necessarily better!. *Annals of Neurology*, **1999**, 46, 135-136	9.4	13
32	Honey bee Royalactin unlocks conserved pluripotency pathway in mammals. *Nature Communications*, **2018**, 9, 5078	17.4	13
31	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	11.5	12
30	Bioengineered Viral Platform for Intramuscular Passive Vaccine Delivery to Human Skeletal Muscle. *Molecular Therapy - Methods and Clinical Development*, **2018**, 10, 144-155	6.4	11
29	Assessment of disease activity in muscular dystrophies by noninvasive imaging. *Journal of Clinical Investigation*, **2013**, 123, 2298-305	15.9	11
28	ARDD 2020: from aging mechanisms to interventions. *Aging*, **2020**, 12, 24484-24503	5.6	11
27	Asynchronous, contagious and digital aging. *Nature Aging*, **2021**, 1, 29-35		11
26	Oligonucleotide-mediated gene therapy for muscular dystrophies. *Neuromuscular Disorders*, **2002**, 12 Suppl 1, S55-60	2.9	10
25	Alive and well? Exploring disease by studying lifespan. *Current Opinion in Genetics and Development*, **2014**, 26, 33-40	4.9	8
24	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	3.9	8
23	Mimicking the niche: cytokines expand muscle stem cells. *Cell Research*, **2015**, 25, 761-2	24.7	7
22	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	7.4	7
21	The ins and outs of aging and longevity. *Annual Review of Physiology*, **2013**, 75, 617-9	23.1	5

20	Electrical stimulation of human neural stem cells via conductive polymer nerve guides enhances peripheral nerve recovery. *Biomaterials*, **2021**, 275, 120982	15.6	5
19	Heterogeneity among muscle precursor cells in adult skeletal muscles with differing regenerative capacities **1998**, 212, 495		5
18	Artificial sweeteners--enhancing glycosylation to treat muscular dystrophies. *New England Journal of Medicine*, **2004**, 351, 1254-6	59.2	4
17	Targeting microRNA-mediated gene repression limits adipogenic conversion of skeletal muscle mesenchymal stromal cells. *Cell Stem Cell*, **2021**, 28, 1323-1334.e8	18	4
16	Computational modeling of malignant ascites reveals CCL5-SDC4 interaction in the immune microenvironment of ovarian cancer. *Molecular Carcinogenesis*, **2021**, 60, 297-312	5	3
15	Monitoring disease activity noninvasively in the model of Duchenne muscular dystrophy. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 7741-7746	11.5	2
14	Regenerative medicine: Of fish and men. *Nature Chemical Biology*, **2014**, 10, 91-2	11.7	2
13	Aging of Stem Cells **2011**, 141-161		2
12	Turning back time: reversing tissue pathology to enhance stem cell engraftment. *Cell Stem Cell*, **2008**, 3, 232-4	18	2
11	Tubastatin A maintains adult skeletal muscle stem cells in a quiescent state ex vivo and improves their engraftment ability in vivo.. *Stem Cell Reports*, **2022**, 17, 82-95	8	2
10	Regeneration, Rejuvenation, and Replacement: Turning Back the Clock on Tissue Aging. *Cold Spring Harbor Perspectives in Biology*, **2021**, 13,	10.2	2
9	Age-Dependent Changes in Skeletal MuscleRegeneration **2008**, 359-374		2
8	Transient non-integrative nuclear reprogramming promotes multifaceted reversal of aging in human cells		1
7	Exercise and angiotensin receptor blockade enhance recovery after orthopaedic trauma in mice by decreasing pain and improving muscle regeneration		1
6	Context-dependent modulation of aggressiveness of pediatric tumors by individual oncogenic RAS isoforms. *Oncogene*, **2021**, 40, 4955-4966	9.2	1
5	Cells, scaffolds, and bioactive factors: Engineering strategies for improving regeneration following volumetric muscle loss. *Biomaterials*, **2021**, 278, 121173	15.6	1
4	Overexpression of thioredoxin-2 attenuates age-related muscle loss by suppressing mitochondrial oxidative stress and apoptosis. *JCSM Rapid Communications*, **2022**, 5, 130-145	2.6	0
3	ATR activity controls stem cell quiescence via the cyclin F-SCF complex.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2115638119	11.5	0

2	Fleeting factors, turning back time. *Nature Biotechnology*, **2017**, 35, 218-220	44.5
1	A sexy spin on nonrandom chromosome segregation. *Cell Stem Cell*, **2013**, 12, 641-3	18