Nir Barzilai

List of Publications by Year
in descending order

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Version: 2024-02-01

130 papers	14,322 citations	38660 50 h-index	22764 112 g-index

140 all docs	140 docs citations	140 times ranked	22270 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	The genetic architecture of type 2 diabetes. Nature, 2016, 536, 41-47.	13.7	952
3	A nutrient-sensing pathway regulates leptin gene expression in muscle and fat. Nature, 1998, 393, 684-688.	13.7	736
4	Metformin as a Tool to Target Aging. Cell Metabolism, 2016, 23, 1060-1065.	7.2	730
5	The Critical Role of Metabolic Pathways in Aging. Diabetes, 2012, 61, 1315-1322.	0.3	647
6	Unique Lipoprotein Phenotype and Genotype Associated With Exceptional Longevity. JAMA - Journal of the American Medical Association, 2003, 290, 2030.	3.8	516
7	Removal of Visceral Fat Prevents Insulin Resistance and Glucose Intolerance of Aging: An Adipokine-Mediated Process?. Diabetes, 2002, 51, 2951-2958.	0.3	499
8	Interventions to Slow Aging in Humans: Are We Ready?. Aging Cell, 2015, 14, 497-510.	3.0	481
9	Undulating changes in human plasma proteome profiles across the lifespan. Nature Medicine, 2019, 25, 1843-1850.	15.2	470
10	Benefits of Metformin in Attenuating the Hallmarks of Aging. Cell Metabolism, 2020, 32, 15-30.	7.2	379
11	Motoric cognitive risk syndrome. Neurology, 2014, 83, 718-726.	1.5	345
12	Genome-wide analysis identifies 12 loci influencing human reproductive behavior. Nature Genetics, 2016, 48, 1462-1472.	9.4	284
13	Functional variants in the LRRK2 gene confer shared effects on risk for Crohnâ€™s disease and Parkinsonâ€™s disease. Science Translational Medicine, 2018, 10, .	5.8	273
14	Exome sequencing of 20,791Âcases of type 2 diabetes and 24,440Âcontrols. Nature, 2019, 570, 71-76.	13.7	248
15	A framework for selection of blood-based biomarkers for geroscience-guided clinical trials: report from the TAME Biomarkers Workgroup. GeroScience, 2018, 40, 419-436.	2.1	221
16	A meta-analysis of genome-wide association studies identifies multiple longevity genes. Nature Communications, 2019, 10, 3669.	5.8	214
17	Humanin: A Novel Central Regulator of Peripheral Insulin Action. PLoS ONE, 2009, 4, e6334.	1.1	200
18	Naturally occurring mitochondrial-derived peptides are age-dependent regulators of apoptosis, insulin sensitivity, and inflammatory markers. Aging, 2016, 8, 796-809.	1.4	185

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19	Sequencing an Ashkenazi reference panel supports population-targeted personal genomics and illuminates Jewish and European origins. Nature Communications, 2014, 5, 4835.	5.8	156
20	Leptin Resistance During Aging Is Independent of Fat Mass. Diabetes, 2002, 51, 1016-1021.	0.3	148
21	Experimental Intrauterine Growth Restriction Induces Alterations in DNA Methylation and Gene Expression in Pancreatic Islets of Rats. Journal of Biological Chemistry, 2010, 285, 15111-15118.	1.6	140
22	Motoric cognitive risk syndrome. Neurology, 2014, 83, 2278-2284.	1.5	133
23	Genome-Wide Scan Informed by Age-Related Disease Identifies Loci for Exceptional Human Longevity. PLoS Genetics, 2015, 11, e1005728.	1.5	128
24	The insulin/IGF-1 signaling in mammals and its relevance to human longevity. Experimental Gerontology, 2005, 40, 873-877.	1.2	117
25	The Somatotropic Axis in Human Aging: Framework for the Current State of Knowledge and Future Research. Cell Metabolism, 2016, 23, 980-989.	7.2	115
26	Metformin regulates metabolic and nonmetabolic pathways in skeletal muscle and subcutaneous adipose tissues of older adults. Aging Cell, 2018, 17, e12723.	3.0	113
27	Offspring of Centenarians Have a Favorable Lipid Profile. Journal of the American Geriatrics Society, 2001, 49, 76-79.	1.3	110
28	Buffering Mechanisms in Aging: A Systems Approach Toward Uncovering the Genetic Component of Aging. PLoS Computational Biology, 2007, 3, e170.	1.5	106
29	Late-life targeting of the IGF-1 receptor improves healthspan and lifespan in female mice. Nature Communications, 2018, 9, 2394.	5.8	106
30	System-wide Benefits of Intermeal Fasting by Autophagy. Cell Metabolism, 2017, 26, 856-871.e5.	7.2	104
31	Lifestyle Factors of People with Exceptional Longevity. Journal of the American Geriatrics Society, 2011, 59, 1509-1512.	1.3	99
32	APOEAlleles and Extreme Human Longevity. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2019, 74, 44-51.	1.7	99
33	Disease drivers of aging. Annals of the New York Academy of Sciences, 2016, 1386, 45-68.	1.8	97
34	Genetics, lifestyle and longevity: Lessons from centenarians. Applied & Translational Genomics, 2015, 4, 23-32.	2.1	90
35	Aging as a Biological Target for Prevention and Therapy. JAMA - Journal of the American Medical Association, 2018, 320, 1321.	3.8	82
36	Compression of Morbidity Is Observed Across Cohorts with Exceptional Longevity. Journal of the American Geriatrics Society, 2016, 64, 1583-1591.	1.3	81

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37	Resveratrol Improves Vascular Function and Mitochondrial Number but Not Glucose Metabolism in Older Adults. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2017, 72, 1703-1709.	1.7	79
38	Screening Human Embryos for Polygenic Traits Has Limited Utility. Cell, 2019, 179, 1424-1435.e8.	13.5	78
39	Motoric Cognitive Risk Syndrome and Falls Risk: A Multi-Center Study. Journal of Alzheimer's Disease, 2016, 53, 1043-1052.	1.2	77
40	The effect of leptin on Lep expression is tissue-specific and nutritionally regulated. Nature Medicine, 1999, 5, 895-899.	15.2	75
41	Aging Is Associated With Resistance to Effects of Leptin on Fat Distribution and Insulin Action. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2002, 57, B225-B231.	1.7	74
42	Insulin Resistance and Aging: A Cause or a Protective Response?. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2012, 67, 1329-1331.	1.7	69
43	Disrupting Mitochondrialâ€“Nuclear Coevolution Affects OXPHOS Complex I Integrity and Impacts Human Health. Genome Biology and Evolution, 2014, 6, 2665-2680.	1.1	68
44	The mitochondrial derived peptide humanin is a regulator of lifespan and healthspan. Aging, 2020, 12, 11185-11199.	1.4	67
45	Insights into the genetic epidemiology of Crohn's and rare diseases in the Ashkenazi Jewish population. PLoS Genetics, 2018, 14, e1007329.	1.5	66
46	Interaction between Aging and Syndrome X: New Insights on the Pathophysiology of Fat Distribution. Annals of the New York Academy of Sciences, 1999, 892, 58-72.	1.8	65
47	Biological Approaches to Mechanistically Understand the Healthy Life Span Extension Achieved by Calorie Restriction and Modulation of Hormones. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2009, 64A, 187-191.	1.7	65
48	Development of clinical trials to extend healthy lifespan. Cardiovascular Endocrinology and Metabolism, 2018, 7, 80-83.	0.5	59
49	Plasma proteomic profile of age, health span, and allâ€cause mortality in older adults. Aging Cell, 2020, 19, e13250.	3.0	58
50	Symptoms of Apathy Independently Predict Incident Frailty and Disability in Community-Dwelling Older Adults. Journal of Clinical Psychiatry, 2017, 78, e529-e536.	1.1	57
51	Genetic Studies Reveal the Role of the Endocrine and Metabolic Systems in Aging. Journal of Clinical Endocrinology and Metabolism, 2010, 95, 4493-4500.	1.8	56
52	Enhanced activation of a â€œnutrientâ€sensingâ€•pathway with age contributes to insulin resistance. FASEB Journal, 2008, 22, 3450-3457.	0.2	51
53	A Frameshift in CSF2RB Predominant Among Ashkenazi Jews Increases Risk for Crohn's Disease and Reduces Monocyte Signaling via GM-CSF. Gastroenterology, 2016, 151, 710-723.e2.	0.6	51
54	Ability of insulin to modulate hepatic glucose production in aging rats is impaired by fat accumulation. American Journal of Physiology - Endocrinology and Metabolism, 2000, 278, E985-E991.	1.8	50

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55	Determinants of penetrance and variable expressivity in monogenic metabolic conditions across 77,184 exomes. Nature Communications, 2021, 12, 3505.	5.8	49
56	Exceptional Parental Longevity Associated with Lower Risk of Alzheimer's Disease and Memory Decline. Journal of the American Geriatrics Society, 2010, 58, 1043-1049.	1.3	48
57	The GH receptor exon 3 deletion is a marker of male-specific exceptional longevity associated with increased GH sensitivity and taller stature. Science Advances, 2017, 3, e1602025.	4.7	47
58	A Low-Frequency Inactivating AKT2 Variant Enriched in the Finnish Population Is Associated With Fasting Insulin Levels and Type 2 Diabetes Risk. Diabetes, 2017, 66, 2019-2032.	0.3	47
59	Evaluating Health Span in Preclinical Models of Aging and Disease: Guidelines, Challenges, and Opportunities for Geroscience. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2016, 71, 1395-1406.	1.7	44
60	The place of genetics in ageing research. Nature Reviews Genetics, 2012, 13, 589-594.	7.7	43
61	Sarcosine Is Uniquely Modulated by Aging and Dietary Restriction in Rodents and Humans. Cell Reports, 2018, 25, 663-676.e6.	2.9	43
62	Central insulinâ€like growth factorâ€1 (<scp>IGF</scp> â€1) restores wholeâ€body insulin action in a model of ageâ€related insulin resistance and <scp>IGF</scp> â€1 decline. Aging Cell, 2016, 15, 181-186.	3.0	42
63	Clinical Trials Targeting Aging and Age-Related Multimorbidity. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2017, 72, glw220.	1.7	41
64	Positive attitude toward life, emotional expression, self-rated health, and depressive symptoms among centenarians and near-centenarians. Aging and Mental Health, 2016, 20, 930-939.	1.5	41
65	Insulin-like Growth Factor-1 and IGF Binding Proteins Predict All-Cause Mortality and Morbidity in Older Adults. Cells, 2020, 9, 1368.	1.8	40
66	Genetic landscape of APOE in human longevity revealed by high-throughput sequencing. Mechanisms of Ageing and Development, 2016, 155, 7-9.	2.2	35
67	Activation-Induced Autophagy Is Preserved in CD4+ T-Cells in Familial Longevity. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2017, 72, 1201-1206.	1.7	35
68	Dissecting the Mechanisms Underlying Unusually Successful Human Health Span and Life Span. Cold Spring Harbor Perspectives in Medicine, 2016, 6, a025098.	2.9	33
69	A geroscience perspective on immune resilience and infectious diseases: a potential case for metformin. GeroScience, 2021, 43, 1093-1112.	2.1	33
70	Effects of FOXO3 Polymorphisms on Survival to Extreme Longevity in Four Centenarian Studies. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2018, 73, 1439-1447.	1.7	32
71	Genetics of extreme human longevity to guide drug discovery for healthy ageing. Nature Metabolism, 2020, 2, 663-672.	5.1	32
72	ARDD 2020: from aging mechanisms to interventions. Aging, 2020, 12, 24484-24503.	1.4	32

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73	Geroscienceâ€guided repurposing of FDAâ€approved drugs to target aging: A proposed process and prioritization. Aging Cell, 2022, 21, e13596.	3.0	32
74	Sequence data and association statistics from 12,940 type 2 diabetes cases and controls. Scientific Data, 2017, 4, 170179.	2.4	31
75	Phenotypes and Genotypes of High Density Lipoprotein Cholesterol in Exceptional Longevity. Current Vascular Pharmacology, 2013, 12, 690-697.	0.8	31
76	Identification of Genes Promoting Skin Youthfulness by Genome-Wide Association Study. Journal of Investigative Dermatology, 2014, 134, 651-657.	0.3	30
77	Plasma proteomic profile of frailty. Aging Cell, 2020, 19, e13193.	3.0	29
78	ICC-dementia (International Centenarian Consortium - dementia): an international consortium to determine the prevalence and incidence of dementia in centenarians across diverse ethnoracial and sociocultural groups. BMC Neurology, 2016, 16, 52.	0.8	28
79	The antagonistic pleiotropy of insulinâ€like growth factor 1. Aging Cell, 2021, 20, e13443.	3.0	28
80	Effect of Exceptional Parental Longevity and Lifestyle Factors on Prevalence of Cardiovascular Disease in Offspring. American Journal of Cardiology, 2017, 120, 2170-2175.	0.7	27
81	Lower circulating insulin-like growth factor-I is associated with better cognition in females with exceptional longevity without compromise to muscle mass and function. Aging, 2016, 8, 2414-2424.	1.4	27
82	Aging does not contribute to the decline in insulin action on storage of muscle glycogen in rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2000, 278, R111-R117.	0.9	25
83	High-depth whole genome sequencing of an Ashkenazi Jewish reference panel: enhancing sensitivity, accuracy, and imputation. Human Genetics, 2018, 137, 343-355.	1.8	24
84	Geroscience in the Age of COVID-19. , 2020, 11, 725.		24
85	Metformin alters skeletal muscle transcriptome adaptations to resistance training in older adults. Aging, 2020, 12, 19852-19866.	1.4	24
86	Rare coding variants in 35 genes associate with circulating lipid levelsâ€”A multi-ancestry analysis of 170,000 exomes. American Journal of Human Genetics, 2022, 109, 81-96.	2.6	24
87	Frailty and Risk of Incident Motoric Cognitive Risk Syndrome. Journal of Alzheimer's Disease, 2019, 71, S85-S93.	1.2	23
88	Association of anti-inflammatory cytokine IL10 polymorphisms with motoric cognitive risk syndrome in an Ashkenazi Jewish population. Neurobiology of Aging, 2017, 58, 238.e1-238.e8.	1.5	22
89	Targeting senescence. Nature Medicine, 2018, 24, 1092-1094.	15.2	22
90	Rare genetic coding variants associated with human longevity and protection against age-related diseases. Nature Aging, 2021, 1, 783-794.	5.3	22

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91	Association of exceptional parental longevity and physical function in aging. Age, 2014, 36, 9677.	3.0	21
92	Novel ultra-rare exonic variants identified in a founder population implicate cadherins in schizophrenia. Neuron, 2021, 109, 1465-1478.e4.	3.8	21
93	Genetic Insights Into Frailty: Association of 9p21-23 Locus With Frailty. Frontiers in Medicine, 2018, 5, 105.	1.2	19
94	Advanced aging phenotype is revealed by epigenetic modifications in rat liver after in utero malnutrition. Aging Cell, 2016, 15, 964-972.	3.0	18
95	Extending human healthspan and longevity: a symposium report. Annals of the New York Academy of Sciences, 2022, 1507, 70-83.	1.8	18
96	Varying Effects of APOE Alleles on Extreme Longevity in European Ethnicities. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2019, 74, S45-S51.	1.7	17
97	Greater effect of polygenic risk score for Alzheimer's disease among younger cases who are apolipoprotein E-Îµ4 carriers. Neurobiology of Aging, 2021, 99, 101.e1-101.e9.	1.5	16
98	Relative Trajectories of Gait and Cognitive Decline in Aging. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2022, 77, 1230-1238.	1.7	15
99	Creating the Next Generation of Translational Geroscientists. Journal of the American Geriatrics Society, 2019, 67, 1934-1939.	1.3	13
100	Latest advances in aging research and drug discovery. Aging, 2019, 11, 9971-9981.	1.4	13
101	Effect of longevity genetic variants on the molecular aging rate. GeroScience, 2021, 43, 1237-1251.	2.1	12
102	Genetic signature of human longevity in PKC and NFâ€ºB signaling. Aging Cell, 2021, 20, e13362.	3.0	12
103	Trajectories of frailty in aging: Prospective cohort study. PLoS ONE, 2021, 16, e0253976.	1.1	12
104	The influence of gender on inheritance of exceptional longevity. Aging, 2015, 7, 412-418.	1.4	12
105	The Rationale for Delaying Aging and the Prevention of Age-Related Diseases. Rambam Maimonides Medical Journal, 2012, 3, e0020.	0.4	11
106	Association of Family History of Exceptional Longevity With Decline in Physical Function in Aging. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2017, 72, 1649-1655.	1.7	11
107	New Locus for Skin Intrinsic Fluorescence in Type 1 Diabetes Also Associated With Blood and Skin Glycated Proteins. Diabetes, 2016, 65, 2060-2071.	0.3	10
108	Differential burden of rare protein truncating variants in Alzheimerâ€™s disease patients compared to centenarians. Human Molecular Genetics, 2016, 25, ddw150.	1.4	10

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109	Redox-mediated regulation of aging and healthspan by an evolutionarily conserved transcription factor HLH-2/Tcf3/E2A. Redox Biology, 2020, 32, 101448.	3.9	10
110	Modulation of Glucose Production by Central Insulin Requires IGF-1 Receptors in AgRP Neurons. Diabetes, 2021, 70, 2237-2249.	0.3	10
111	Intracellular Pathways of Insulin-Mediated Glucose Uptake before and after Puberty in Conscious Rats1. Pediatric Research, 1997, 41, 340-345.	1.1	10
112	Genetic variation in Sirtuin 1 (SIRT1) is associated with lipid profiles but not with longevity in Ashkenazi Jews. Translational Research, 2015, 165, 480-481.	2.2	9
113	Association between Sleep Patterns and Health in Families with Exceptional Longevity. Frontiers in Medicine, 2017, 4, 214.	1.2	9
114	The role of dietary patterns and exceptional parental longevity in healthy aging. Nutrition and Healthy Aging, 2017, 4, 247-254.	0.5	7
115	Similar burden of pathogenic coding variants in exceptionally longâ€lived individuals and individuals without exceptional longevity. Aging Cell, 2020, 19, e13216.	3.0	7
116	Einstein's institute for aging research: collaborative and programmatic approaches in the search for successful aging. Experimental Gerontology, 2004, 39, 151-157.	1.2	6
117	Einstein-Nathan Shock Center: translating the hallmarks of aging to extend human health span. GeroScience, 2021, 43, 2167-2182.	2.1	5
118	Meeting Report: Aging Research and Drug Discovery. Aging, 2022, 14, 530-543.	1.4	4
119	PopCluster: an algorithm to identify genetic variants with ethnicity-dependent effects. Bioinformatics, 2019, 35, 3046-3054.	1.8	3
120	A Compendium of Age-Related PheWAS and GWAS Traits for Human Genetic Association Studies, Their Networks and Genetic Correlations. Frontiers in Genetics, 2021, 12, 680560.	1.1	3
121	Buffering Mechanisms in Aging: A systems approach towards uncovering the genetic component of aging. PLoS Computational Biology, 2005, preprint, e170.	1.5	2
122	BIOMARKER STRATEGIES FOR GEROSCIENCE-GUIDED CLINICAL TRIALS. Innovation in Aging, 2019, 3, S745-S746.	0.0	1
123	Undulating changes in human plasma proteome profiles across the lifespan are linked to disease. Alzheimer's and Dementia, 2020, 16, e043868.	0.4	1
124	[P3â€“118]: INCREASED BURDEN OF RARE LOSSâ€OFâ€FUNCTION VARIANTS IN ALZHEIMER's DISEASE PATIENTS COMPARED TO CENTENARIANS. Alzheimer's and Dementia, 2017, 13, P980.	0.4	0
125	INVESTIGATING DYNAMICS OF AGE-ASSOCIATED TRANSCRIPTIONAL NETWORKS WITH INTERVENTIONS TARGETING AGING. Innovation in Aging, 2019, 3, S559-S559.	0.0	0
126	Prevalent skin cancer and conservative faith may be linked with cognitive impairment in Ashkenazi Jewish exceptionally longâ€lived individuals. Alzheimer's and Dementia, 2020, 16, e046002.	0.4	0

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127	The Hypothalamic-Pituitary-Testicular Axis in Exceptionally Old Men. Journal of the Endocrine Society, 2021, 5, A727-A727.	0.1	0
128	Novel neuroâ€regulation of peripheral metabolism in aging. FASEB Journal, 2009, 23, 425.2.	0.2	0
129	Genetic and Epigenetic Contributions to Longevity. Blood, 2010, 116, SCI-1-SCI-1.	0.6	0
130	Effect of Longevity Genetic Variants on the Molecular Aging Rate. Innovation in Aging, 2020, 4, 852-852.	0.0	0