

# Matthias Hackl

## List of Publications by Year in descending order

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Version: 2024-02-01

82  
papers

3,541  
citations

126907

33  
h-index

144013

57  
g-index

87  
all docs

87  
docs citations

87  
times ranked

4624  
citing authors

#	ARTICLE	IF	CITATIONS
1	miR-17, miR-19b, miR-20a, and miR-106a are downregulated in human aging. <i>Aging Cell</i> , 2010, 9, 291-296.	7.7	338
2	Circulating microRNA Signatures in Patients With Idiopathic and Postmenopausal Osteoporosis and Fragility Fractures. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2016, 101, 4125-4134.	3.6	170
3	Differentially circulating miRNAs after recent osteoporotic fractures can influence osteogenic differentiation. <i>Bone</i> , 2015, 79, 43-51.	2.9	166
4	Small extracellular vesicles and their miRNA cargo are anti-apoptotic members of the senescence-associated secretory phenotype. <i>Aging</i> , 2018, 10, 1103-1132.	3.1	162
5	Circulating microRNAs as novel biomarkers for bone diseases – “Complex signatures for multifactorial diseases?”. <i>Molecular and Cellular Endocrinology</i> , 2016, 432, 83-95.	3.2	137
6	miR-17-92 cluster: ups and downs in cancer and aging. <i>Biogerontology</i> , 2010, 11, 501-506.	3.9	135
7	Serum miRNA Signatures Are Indicative of Skeletal Fractures in Postmenopausal Women With and Without Type 2 Diabetes and Influence Osteogenic and Adipogenic Differentiation of Adipose Tissue-Derived Mesenchymal Stem Cells In Vitro. <i>Journal of Bone and Mineral Research</i> , 2016, 31, 2173-2192.	2.8	115
8	Comprehensive genome and epigenome characterization of CHO cells in response to evolutionary pressures and over time. <i>Biotechnology and Bioengineering</i> , 2016, 113, 2241-2253.	3.3	112
9	Next-generation sequencing of the Chinese hamster ovary microRNA transcriptome: Identification, annotation and profiling of microRNAs as targets for cellular engineering. <i>Journal of Biotechnology</i> , 2011, 153, 62-75.	3.8	102
10	High levels of oncomiR-21 contribute to the senescence-induced growth arrest in normal human cells and its knockdown increases the replicative lifespan. <i>Aging Cell</i> , 2013, 12, 446-458.	6.7	99
11	Unraveling the Chinese hamster ovary cell line transcriptome by next-generation sequencing. <i>Journal of Biotechnology</i> , 2011, 156, 227-235.	3.8	96
12	Dynamic mRNA and miRNA profiling of CHO-K1 suspension cell cultures. <i>Biotechnology Journal</i> , 2012, 7, 500-515.	3.5	83
13	MicroRNAs differentially present in the plasma of HIV elite controllers reduce HIV infection in vitro. <i>Scientific Reports</i> , 2014, 4, 5915.	3.3	82
14	Upregulation of miR-24 is associated with a decreased DNA damage response upon etoposide treatment in highly differentiated CD8 <sup>+</sup> T cells sensitizing them to apoptotic cell death. <i>Aging Cell</i> , 2012, 11, 579-587.	6.7	78
15	CHO microRNA engineering is growing up: Recent successes and future challenges. <i>Biotechnology Advances</i> , 2013, 31, 1501-1513.	11.7	77
16	Stable overexpression of miR-17 enhances recombinant protein production of CHO cells. <i>Journal of Biotechnology</i> , 2014, 175, 38-44.	3.8	67
17	Altered MicroRNA Profile in Osteoporosis Caused by Impaired WNT Signaling. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2018, 103, 1985-1996.	3.6	65
18	Bone-related Circulating MicroRNAs miR-29b-3p, miR-550a-3p, and miR-324-3p and their Association to Bone Microstructure and Histomorphometry. <i>Scientific Reports</i> , 2018, 8, 4867.	3.3	65

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19	Identification of microRNA-mRNA functional interactions in UVB-induced senescence of human diploid fibroblasts. <i>BMC Genomics</i> , 2013, 14, 224.	2.8	55
20	Serum microRNAs as novel biomarkers for osteoporotic vertebral fractures. <i>Bone</i> , 2020, 130, 115105.	2.9	54
21	Association of cardiometabolic microRNAs with COVID-19 severity and mortality. <i>Cardiovascular Research</i> , 2022, 118, 461-474.	3.8	51
22	miRNAs " pathway engineering of CHO cell factories that avoids translational burdening. <i>Trends in Biotechnology</i> , 2012, 30, 405-406.	9.3	50
23	Conserved MicroRNAs in Chinese hamster ovary cell lines. <i>Biotechnology and Bioengineering</i> , 2011, 108, 475-480.	3.3	49
24	Construction of a Stability Landscape of the CH3 Domain of Human IgG1 by Combining Directed Evolution with High Throughput Sequencing. <i>Journal of Molecular Biology</i> , 2012, 423, 397-412.	4.2	48
25	Computational identification of microRNA gene loci and precursor microRNA sequences in CHO cell lines. <i>Journal of Biotechnology</i> , 2012, 158, 151-155.	3.8	46
26	Utilization and evaluation of CHO-specific sequence databases for mass spectrometry based proteomics. <i>Biotechnology and Bioengineering</i> , 2012, 109, 1386-1394.	3.3	46
27	Growth, productivity and protein glycosylation in a CHO EpoFc producer cell line adapted to glutamine-free growth. <i>Journal of Biotechnology</i> , 2012, 157, 295-303.	3.8	45
28	A screening method to assess biological effects of microRNA overexpression in Chinese hamster ovary cells. <i>Biotechnology and Bioengineering</i> , 2012, 109, 1376-1385.	3.3	45
29	A Deletion in the Golgi $\alpha$ -Mannosidase II Gene of <i>Caenorhabditis elegans</i> Results in Unexpected Non-wild-type N-Glycan Structures. <i>Journal of Biological Chemistry</i> , 2006, 281, 28265-28277.	3.4	44
30	MicroRNA levels in bone and blood change during bisphosphonate and teriparatide therapy in an animal model of postmenopausal osteoporosis. <i>Bone</i> , 2020, 131, 115104.	2.9	40
31	MicroRNAs and toxicology: A love marriage. <i>Toxicology Reports</i> , 2017, 4, 634-636.	3.3	38
32	Cost-utility analysis of fracture risk assessment using microRNAs compared with standard tools and no monitoring in the Austrian female population. <i>Bone</i> , 2018, 108, 44-54.	2.9	38
33	Circulating miRNAs in bone health and disease. <i>Bone</i> , 2021, 145, 115787.	2.9	36
34	Biotransformation of the Mycotoxin Zearalenone to its Metabolites Hydrolyzed Zearalenone (HZEN) and Decarboxylated Hydrolyzed Zearalenone (DHZEN) Diminishes its Estrogenicity In Vitro and In Vivo. <i>Toxins</i> , 2019, 11, 481.	3.4	35
35	microRNAs as Promising Biomarkers of Platelet Activity in Antiplatelet Therapy Monitoring. <i>International Journal of Molecular Sciences</i> , 2020, 21, 3477.	4.1	34
36	Predicting Postoperative Liver Dysfunction Based on Blood-Derived MicroRNA Signatures. <i>Hepatology</i> , 2019, 69, 2636-2651.	7.3	33

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37	A robust machine learning framework to identify signatures for frailty: a nested case-control study in four aging European cohorts. <i>GeroScience</i> , 2021, 43, 1317-1329.	4.6	31
38	Identification of microRNAs specific for high producer CHO cell lines using steady-state cultivation. <i>Applied Microbiology and Biotechnology</i> , 2014, 98, 7535-7548.	3.6	29
39	Enhanced protein production by microRNA-30 family in CHO cells is mediated by the modulation of the ubiquitin pathway. <i>Journal of Biotechnology</i> , 2015, 212, 32-43.	3.8	28
40	Transcriptomic changes in CHO cells after adaptation to suspension growth in protein-free medium analysed by a species-specific microarray. <i>Journal of Biotechnology</i> , 2017, 257, 13-21.	3.8	25
41	Developing a toolkit for the assessment and monitoring of musculoskeletal ageing. <i>Age and Ageing</i> , 2018, 47, iv1-iv19.	1.6	25
42	MicroRNA Profiling Reveals Distinct Signatures in Degenerative Rotator Cuff Pathologies. <i>Journal of Orthopaedic Research</i> , 2020, 38, 202-211.	2.3	24
43	Molecular and Cellular Effects of In Vitro Shockwave Treatment on Lymphatic Endothelial Cells. <i>PLoS ONE</i> , 2014, 9, e114806.	2.5	23
44	Microarray profiling of preselected CHO host cell subclones identifies gene expression patterns associated with increased production capacity. <i>Biotechnology Journal</i> , 2015, 10, 1625-1638.	3.5	22
45	Clopidogrel in Critically Ill Patients. <i>Clinical Pharmacology and Therapeutics</i> , 2018, 103, 217-223.	4.7	22
46	Prediction of transcribed PIWI-interacting RNAs from CHO RNAseq data. <i>Journal of Biotechnology</i> , 2013, 166, 51-57.	3.8	21
47	Endogenous microRNA clusters outperform chimeric sequence clusters in Chinese hamster ovary cells. <i>Biotechnology Journal</i> , 2014, 9, 538-544.	3.5	20
48	microRNA-146a controls age-related bone loss. <i>Aging Cell</i> , 2020, 19, e13244.	6.7	20
49	SVF-derived extracellular vesicles carry characteristic miRNAs in lipedema. <i>Scientific Reports</i> , 2020, 10, 7211.	3.3	20
50	MicroRNAs in porcine uterus and serum are affected by zearalenone and represent a new target for mycotoxin biomarker discovery. <i>Scientific Reports</i> , 2019, 9, 9408.	3.3	19
51	Combined proteomics/miRNomics of dendritic cell immunotherapy-treated glioblastoma patients as a screening for survival-associated factors. <i>Npj Vaccines</i> , 2020, 5, 5.	6.0	19
52	Peripheral blood RNA biomarkers for cardiovascular disease from bench to bedside: a position paper from the EU-CardioRNA COST action CA17129. <i>Cardiovascular Research</i> , 2022, 118, 3183-3197.	3.8	18
53	Longitudinal Changes of Circulating miRNAs During Bisphosphonate and Teriparatide Treatment in an Animal Model of Postmenopausal Osteoporosis. <i>Journal of Bone and Mineral Research</i> , 2020, 36, 1131-1144.	2.8	17
54	Cardiovascular RNA markers and artificial intelligence may improve COVID-19 outcome: a position paper from the EU-CardioRNA COST Action CA17129. <i>Cardiovascular Research</i> , 2021, 117, 1823-1840.	3.8	17

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55	A signature of 12 microRNAs is robustly associated with growth rate in a variety of CHO cell lines. <i>Journal of Biotechnology</i> , 2016, 235, 150-161.	3.8	16
56	A MicroRNA Next-Generation-Sequencing Discovery Assay (miND) for Genome-Scale Analysis and Absolute Quantitation of Circulating MicroRNA Biomarkers. <i>International Journal of Molecular Sciences</i> , 2022, 23, 1226.	4.1	16
57	Noncoding RNAs, post-transcriptional RNA operons and Chinese hamster ovary cells. <i>Pharmaceutical Bioprocessing</i> , 2015, 3, 227-247.	0.8	15
58	Analysis of microRNA transcription and post-transcriptional processing by Dicer in the context of CHO cell proliferation. <i>Journal of Biotechnology</i> , 2014, 190, 76-84.	3.8	14
59	A new player in the game: treatment with antagomiR-21a-5p significantly attenuates histological and echocardiographic effects of experimental autoimmune myocarditis. <i>Cardiovascular Research</i> , 2022, 118, 556-572.	3.8	14
60	Systems analysis of miRNA biomarkers to inform drug safety. <i>Archives of Toxicology</i> , 2021, 95, 3475-3495.	4.2	14
61	Circulating serum microRNAs including senescent miR-31-5p are associated with incident fragility fractures in older postmenopausal women with type 2 diabetes mellitus. <i>Bone</i> , 2022, 158, 116308.	2.9	14
62	Annotation of additional evolutionary conserved microRNAs in CHO cells from updated genomic data. <i>Biotechnology and Bioengineering</i> , 2015, 112, 1488-1493.	3.3	13
63	miRNA-21 deficiency impairs alveolar socket healing in mice. <i>Journal of Periodontology</i> , 2020, 91, 1664-1672.	3.4	12
64	Unique, Gender-Dependent Serum microRNA Profile in PLS3 Gene-Related Osteoporosis. <i>Journal of Bone and Mineral Research</i> , 2020, 35, 1962-1973.	2.8	12
65	Circulating miR-19a-3p and miR-19b-3p characterize the human aging process and their isomiRs associate with healthy status at extreme ages. <i>Ageing Cell</i> , 2021, 20, e13409.	6.7	12
66	Next-generation sequencing of the CHO cell transcriptome. <i>BMC Proceedings</i> , 2011, 5, P6.	1.6	11
67	Circulating miRNAs Associated With ER Stress and Organ Damage in a Preclinical Model of Trauma Hemorrhagic Shock. <i>Frontiers in Medicine</i> , 2020, 7, 568096.	2.6	8
68	Combining laser microdissection and microRNA expression profiling to unmask microRNA signatures in complex tissues. <i>BioTechniques</i> , 2019, 67, 276-285.	1.8	6
69	miND (miRNA NGS Discovery pipeline): a small RNA-seq analysis pipeline and report generator for microRNA biomarker discovery studies. <i>F1000Research</i> , 0, 11, 233.	1.6	6
70	Editorial: Non-coding RNA in aging and age-associated diseases – from intracellular regulators to hormone like actions. <i>Mechanisms of Ageing and Development</i> , 2017, 168, 1-2.	4.6	4
71	GiSAO.db: a database for ageing research. <i>BMC Genomics</i> , 2011, 12, 262.	2.8	3
72	Size changes in miR-21 knockout mice: Geometric morphometrics on teeth, alveolar bone and mandible. <i>Molecular Medicine Reports</i> , 2021, 23, .	2.4	3

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73	Transient manipulation of the expression level of selected growth rate correlating microRNAs does not increase growth rate in CHO-K1 cells. Journal of Biotechnology, 2019, 295, 63-70.	3.8	2
74	The CHO miRNA Transcriptome. , 2012, , 49-64.		2
75	Identification of process relevant miRNA in CHO cell lines - Process profiling reveals interesting targets for cell line engineering. BMC Proceedings, 2013, 7, .	1.6	1
76	One plus one makes three: adding value by coâ€¢transfection of antiâ€¢apoptotic genes during transient gene expression. Biotechnology Journal, 2014, 9, 1101-1102.	3.5	1
77	MicroRNA Expression Profiling in Porcine Liver, Jejunum and Serum upon Dietary DON Exposure Reveals Candidate Toxicity Biomarkers. International Journal of Molecular Sciences, 2021, 22, 12043.	4.1	1
78	Effect of Anti-Osteoporotic Treatments on Circulating and Bone MicroRNA Patterns in Osteopenic ZDF Rats. International Journal of Molecular Sciences, 2022, 23, 6534.	4.1	1
79	5.2 Functional -Omics for Cell Lines and Processes: The -Omics Technologies on the Example of CHO Cells. , 2014, , 326-367.		0
80	Analytical challenges in microRNA biomarker development: Best practices for analyzing microRNAs in cell-free biofluids. , 2021, , 415-430.		0
81	Development of the Bone Phenotype and <sc>microRNA</sc> Profile in Adults With Lowâ€¢Density Lipoprotein Receptorâ€¢Related Protein 5â€¢High Bone Mass (<sc>LRP5â€¢HBM)</sc> Disease. JBMR Plus, 2021, 2.7 5, e10534.		0
82	FROM REPLICATIVE SENESCENCE TO MICRORNA BASED DIAGNOSTICS OF AGE-ASSOCIATED DISEASES. Osteoporosis and Bone Diseases, 2016, 19, 5-7.	1.4	0