List of Publications by Year in descending order

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HIROKI P HEDA

#	Article	IF	CITATIONS
1	A jerk-based algorithm ACCEL for the accurate classification of sleep–wake states from arm acceleration. IScience, 2022, 25, 103727.	4.1	10
2	High-throughput Genetically Modified Animal Experiments Achieved by Next-generation Mammalian Genetics. Journal of Biological Rhythms, 2022, , 074873042210750.	2.6	1
3	A design principle of spindle oscillations in mammalian sleep. IScience, 2022, 25, 103873.	4.1	0
4	The 103,200-arm acceleration dataset in the UK Biobank revealed a landscape of human sleep phenotypes. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2116729119.	7.1	17
5	Phosphorylation by casein kinase 2 enhances the interaction between ERâ€phagy receptor TEX264 and ATG8 proteins. EMBO Reports, 2022, 23, e54801.	4.5	20
6	A hybrid open-top light-sheet microscope for versatile multi-scale imaging of cleared tissues. Nature Methods, 2022, 19, 613-619.	19.0	54
7	A design principle for posttranslational chaotic oscillators. IScience, 2021, 24, 101946.	4.1	10
8	Malignant subclone drives metastasis of genetically and phenotypically heterogenous cell clusters through fibrotic niche generation. Nature Communications, 2021, 12, 863.	12.8	27
9	Whole-organ analysis of TGF-β-mediated remodelling of the tumour microenvironment by tissue clearing. Communications Biology, 2021, 4, 294.	4.4	14
10	Activation of Sympathetic Signaling in Macrophages Blocks Systemic Inflammation and Protects against Renal Ischemia-Reperfusion Injury. Journal of the American Society of Nephrology: JASN, 2021, 32, 1599-1615.	6.1	17
11	NEK9 regulates primary cilia formation by acting as a selective autophagy adaptor for MYH9/myosin IIA. Nature Communications, 2021, 12, 3292.	12.8	30
12	CUBIC-Cloud provides an integrative computational framework toward community-driven whole-mouse-brain mapping. Cell Reports Methods, 2021, 1, 100038.	2.9	12
13	Mechanical load regulates bone growth via periosteal Osteocrin. Cell Reports, 2021, 36, 109380.	6.4	29
14	Visualization of the cancer cell cycle by tissue learing technology using the Fucci reporter system. Cancer Science, 2021, 112, 3796-3809.	3.9	7
15	The circadian clock ticks in organoids. EMBO Journal, 2021, , e110157.	7.8	2
16	Towards organism-level systems biology by next-generation genetics and whole-organ cell profiling. Biophysical Reviews, 2021, 13, 1113-1126.	3.2	1
17	Tissue clearing. Nature Reviews Methods Primers, 2021, 1, .	21.2	56
18	Tissue clearing and its applications inÂneuroscience. Nature Reviews Neuroscience, 2020, 21, 61-79.	10.2	350

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19	The oral hypoxia-inducible factor prolyl hydroxylase inhibitor enarodustat counteracts alterations in renal energy metabolism inÂtheÂearlyÂstages of diabetic kidney disease. Kidney International, 2020, 97, 934-950.	5.2	73
20	Rapid and easy-to-use ES cell manipulation device with a small groove near culturing wells. BMC Research Notes, 2020, 13, 453.	1.4	0
21	Generation of gene-corrected iPSCs line (KEIUi001-A) from a PARK8 patient iPSCs with familial Parkinson's disease carrying the I2020T mutation in LRRK2. Stem Cell Research, 2020, 49, 102073.	0.7	3
22	Reflections on the past two decades of neuroscience. Nature Reviews Neuroscience, 2020, 21, 524-534.	10.2	35
23	Generation of a p16 Reporter Mouse and Its Use to Characterize and Target p16high Cells InÂVivo. Cell Metabolism, 2020, 32, 814-828.e6.	16.2	93
24	Phosphorylation Hypothesis of Sleep. Frontiers in Psychology, 2020, 11, 575328.	2.1	18
25	Whole-Brain Profiling of Cells and Circuits in Mammals by Tissue Clearing and Light-Sheet Microscopy. Neuron, 2020, 106, 369-387.	8.1	145
26	The cellular model of albumin endocytosis uncovers link between membrane and nuclear proteins. Journal of Cell Science, 2020, 133, .	2.0	5
27	Mass spectrometry-based absolute quantification of amyloid proteins in pathology tissue specimens: Merits and limitations. PLoS ONE, 2020, 15, e0235143.	2.5	8
28	Visualization and molecular characterization of whole-brain vascular networks with capillary resolution. Nature Communications, 2020, 11, 1104.	12.8	57
29	Versatile whole-organ/body staining and imaging based on electrolyte-gel properties of biological tissues. Nature Communications, 2020, 11, 1982.	12.8	134
30	Protocol for Imaging and Analysis of Mouse Tumor Models with CUBIC Tissue Clearing. STAR Protocols, 2020, 1, 100191.	1.2	6
31	Title is missing!. , 2020, 15, e0235143.		0
32	Title is missing!. , 2020, 15, e0235143.		0
33	Title is missing!. , 2020, 15, e0235143.		0
34	Title is missing!. , 2020, 15, e0235143.		0
35	Title is missing!. , 2020, 15, e0235143.		0
36	Title is missing!. , 2020, 15, e0235143.		0

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37	Organism-level systems biology by next-generation genetics and whole-organ cell profiling. IBRO Reports, 2019, 6, S38-S39.	0.3	0
38	A Microfluidic Platform Based on Robust Gas and Liquid Exchange for Long-term Culturing of Explanted Tissues. Analytical Sciences, 2019, 35, 1141-1147.	1.6	5
39	Genes and Ion Channels in the Circadian and Homeostatic Regulation of Sleep. Handbook of Behavioral Neuroscience, 2019, 30, 181-193.	0.7	2
40	Comprehensive three-dimensional analysis (CUBIC-kidney) visualizes abnormal renal sympathetic nerves after ischemia/reperfusion injury. Kidney International, 2019, 96, 129-138.	5.2	34
41	Novel 3D analysis using optical tissue clearing documents the evolution of murine rapidly progressive glomerulonephritis. Kidney International, 2019, 96, 505-516.	5.2	35
42	Next-generation human genetics for organism-level systems biology. Current Opinion in Biotechnology, 2019, 58, 137-145.	6.6	5
43	Advanced CUBIC tissue clearing for whole-organ cell profiling. Nature Protocols, 2019, 14, 3506-3537.	12.0	127
44	Molecular Mechanisms of REM Sleep. Frontiers in Neuroscience, 2019, 13, 1402.	2.8	27
45	A period without PER: understanding 24-hour rhythms without classic transcription and translation feedback loops. F1000Research, 2019, 8, 499.	1.6	10
46	Cell-free synthesis of stable isotope-labeled internal standards for targeted quantitative proteomics. Synthetic and Systems Biotechnology, 2018, 3, 97-104.	3.7	17
47	A three-dimensional single-cell-resolution whole-brain atlas using CUBIC-X expansion microscopy and tissue clearing. Nature Neuroscience, 2018, 21, 625-637.	14.8	234
48	Amnionless-mediated glycosylation is crucial for cell surface targeting of cubilin in renal and intestinal cells. Scientific Reports, 2018, 8, 2351.	3.3	27
49	Rhythms: The dark side meets the light. Science, 2018, 359, 1210-1211.	12.6	2
50	Design Principles of Phosphorylation-Dependent Timekeeping in Eukaryotic Circadian Clocks. Cold Spring Harbor Perspectives in Biology, 2018, 10, a028357.	5.5	27
51	Lost in clocks: non anonical circadian oscillation discovered in Drosophila cells. Molecular Systems Biology, 2018, 14, e8567.	7.2	2
52	Whole-Brain Analysis of Cells and Circuits by Tissue Clearing and Light-Sheet Microscopy. Journal of Neuroscience, 2018, 38, 9330-9337.	3.6	45
53	Leak potassium channels regulate sleep duration. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9459-E9468.	7.1	39
54	Easy and efficient production of completely embryonic-stem-cell-derived mice using a micro-aggregation device. PLoS ONE, 2018, 13, e0203056.	2.5	9

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55	Comparison of the 3-D patterns of the parasympathetic nervous system in the lung at late developmental stages between mouse and chicken. Developmental Biology, 2018, 444, S325-S336.	2.0	10
56	Chemical Landscape for Tissue Clearing Based on Hydrophilic Reagents. Cell Reports, 2018, 24, 2196-2210.e9.	6.4	221
57	Muscarinic Acetylcholine Receptors Chrm1 and Chrm3 Are Essential for REM Sleep. Cell Reports, 2018, 24, 2231-2247.e7.	6.4	75
58	Ca ²⁺ â€Dependent Hyperpolarization Pathways in Sleep Homeostasis and Mental Disorders. BioEssays, 2018, 40, 1700105.	2.5	19
59	The Impairments of Ca2+-dependent Hyperpolarization Pathway Altered NREM Sleep Duration in Mice. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO1-6-3.	0.0	0
60	A Design Principle for an Autonomous Post-translational Pattern Formation. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, PO2-14-19.	0.0	0
61	Towards Organism-level Systems Biology. Proceedings for Annual Meeting of the Japanese Pharmacological Society, 2018, WCP2018, JPS-FS-1.	0.0	0
62	Compass in the data ocean: Toward chronotherapy. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5069-5071.	7.1	1
63	Ca2+-dependent hyperpolarization hypothesis for mammalian sleep. Neuroscience Research, 2017, 118, 48-55.	1.9	11
64	Fast and slow Ca2+-dependent hyperpolarization mechanisms connect membrane potential and sleep homeostasis. Current Opinion in Neurobiology, 2017, 44, 212-221.	4.2	16
65	Knockout-Rescue Embryonic Stem Cell-Derived Mouse Reveals Circadian-Period Control by Quality and Quantity of CRY1. Molecular Cell, 2017, 65, 176-190.	9.7	72
66	Cochlear Cell Modeling Using Disease-Specific iPSCs Unveils a Degenerative Phenotype and Suggests Treatments for Congenital Progressive Hearing Loss. Cell Reports, 2017, 18, 68-81.	6.4	63
67	Temperature-Sensitive Substrate and Product Binding Underlie Temperature-Compensated Phosphorylation in the Clock. Molecular Cell, 2017, 67, 783-798.e20.	9.7	79
68	CUBIC pathology: three-dimensional imaging for pathological diagnosis. Scientific Reports, 2017, 7, 9269.	3.3	110
69	Production of knock-in mice in a single generation from embryonic stem cells. Nature Protocols, 2017, 12, 2513-2530.	12.0	21
70	Neuronal signals regulate obesity induced β-cell proliferation by FoxM1 dependent mechanism. Nature Communications, 2017, 8, 1930.	12.8	69
71	Guidelines for Genome-Scale Analysis of Biological Rhythms. Journal of Biological Rhythms, 2017, 32, 380-393.	2.6	237
72	Whole-Body Profiling of Cancer Metastasis with Single-Cell Resolution. Cell Reports, 2017, 20, 236-250.	6.4	194

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73	A Design Principle for an Autonomous Post-translational Pattern Formation. Cell Reports, 2017, 19, 863-874.	6.4	9
74	Next-generation mammalian genetics toward organism-level systems biology. Npj Systems Biology and Applications, 2017, 3, 15.	3.0	16
75	Systems Biology-Derived Discoveries of Intrinsic Clocks. Frontiers in Neurology, 2017, 8, 25.	2.4	31
76	Whole-body and whole-organ clearing and imaging with single-cell resolution. , 2017, , .		0
77	Cell-cycle-independent transitions in temporal identity of mammalian neural progenitor cells. Nature Communications, 2016, 7, 11349.	12.8	78
78	Mass spectrometry-based absolute quantification reveals rhythmic variation of mouse circadian clock proteins. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E3461-7.	7.1	69
79	Chemical Principles in Tissue Clearing and Staining Protocols for Whole-Body Cell Profiling. Annual Review of Cell and Developmental Biology, 2016, 32, 713-741.	9.4	238
80	Mammalian Reverse Genetics without Crossing Reveals Nr3a as a Short-Sleeper Gene. Cell Reports, 2016, 14, 662-677.	6.4	106
81	Involvement of Ca2+-Dependent Hyperpolarization in Sleep Duration in Mammals. Neuron, 2016, 90, 70-85.	8.1	149
82	Whole-body and Whole-Organ Clearing and Imaging Techniques with Single-Cell Resolution: Toward Organism-Level Systems Biology in Mammals. Cell Chemical Biology, 2016, 23, 137-157.	5.2	263
83	Seeing the forest and trees: wholeâ€body and wholeâ€brain imaging for circadian biology. Diabetes, Obesity and Metabolism, 2015, 17, 47-54.	4.4	8
84	A Simple Protocol to Clear and Transparentize the Brain. Seibutsu Butsuri, 2015, 55, 145-147.	0.1	0
85	Title is missing!. Kagaku To Seibutsu, 2015, 53, 737-740.	0.0	0
86	Advanced CUBIC protocols for whole-brain and whole-body clearing and imaging. Nature Protocols, 2015, 10, 1709-1727.	12.0	615
87	Non-Enzymatic DNA Cleavage Reaction Induced by 5-Ethynyluracil in Methylamine Aqueous Solution and Application to DNA Concatenation. PLoS ONE, 2014, 9, e92369.	2.5	3
88	Whole-Brain Imaging with Single-Cell Resolution Using Chemical Cocktails and Computational Analysis. Cell, 2014, 157, 726-739.	28.9	1,097
89	Whole-Body Imaging with Single-Cell Resolution by Tissue Decolorization. Cell, 2014, 159, 911-924.	28.9	404
90	A Mammalian Circadian Clock Model Incorporating Daytime Expression Elements. Biophysical Journal, 2014, 107, 1462-1473.	0.5	24

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91	Quartz-Seq: a highly reproducible and sensitive single-cell RNA sequencing method, reveals non-genetic gene-expression heterogeneity. Genome Biology, 2013, 14, R31.	8.8	378
92	<scp>FASTER</scp> : an unsupervised fully automated sleep staging method for mice. Genes To Cells, 2013, 18, 502-518.	1.2	40
93	Picrotoxin dramatically speeds the mammalian circadian clock independent of Cys-loop receptors. Journal of Neurophysiology, 2013, 110, 103-108.	1.8	11
94	Context-Dependent Wiring of Sox2 Regulatory Networks for Self-Renewal of Embryonic and Trophoblast Stem Cells. Molecular Cell, 2013, 52, 380-392.	9.7	122
95	Mammalian Circadian Clock: The Roles of Transcriptional Repression and Delay. Handbook of Experimental Pharmacology, 2013, , 359-377.	1.8	27
96	Different circadian expression of major matrix-related genes in various types of cartilage: modulation by light–dark conditions. Journal of Biochemistry, 2013, 154, 373-381.	1.7	24
97	Establishment of <scp><i>TSHÂ</i></scp> β realâ€ŧime monitoring system in mammalian photoperiodism. Genes To Cells, 2013, 18, 575-588.	1.2	18
98	1P283 From cell-autonomous circadian clocks to tissue-level timekeeping(25. Equality Nonequilibrium) Tj ETQqC	0 0 8.1gBT /	Overlock 10
99	An automated system for high-throughput single cell-based breeding. Scientific Reports, 2013, 3, 1191.	3.3	66
100	Identification of a Novel Cryptochrome Differentiating Domain Required for Feedback Repression in Circadian Clock Function. Journal of Biological Chemistry, 2012, 287, 25917-25926.	3.4	67
101	Human blood metabolite timetable indicates internal body time. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15036-15041.	7.1	188
102	A Design Principle for a Posttranslational Biochemical Oscillator. Cell Reports, 2012, 2, 938-950.	6.4	58
103	Transcriptome Tomography for Brain Analysis in the Web-Accessible Anatomical Space. PLoS ONE, 2012, 7, e45373.	2.5	17
104	Delay in Feedback Repression by Cryptochrome 1 Is Required for Circadian Clock Function. Cell, 2011, 144, 268-281.	28.9	288
105	Acute induction of Eya3 by late-night light stimulation triggers TSHÎ ² expression in photoperiodism. Neuroscience Research, 2011, 71, e172.	1.9	1
106	Quantitative Expression Profile of Distinct Functional Regions in the Adult Mouse Brain. PLoS ONE, 2011, 6, e23228.	2.5	60
107	Understanding systems-level properties: timely stories from the study of clocks. Nature Reviews Genetics, 2011, 12, 407-416.	16.3	124
108	Perturbation analyses of intermolecular interactions. Physical Review E, 2011, 84, 026704.	2.1	3

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109	Acute Induction of Eya3 by Late-Night Light Stimulation Triggers TSHÎ ² Expression in Photoperiodism. Current Biology, 2010, 20, 2199-2206.	3.9	101
110	Challenges in synthetically designing mammalian circadian clocks. Current Opinion in Biotechnology, 2010, 21, 556-565.	6.6	8
111	Transcriptomic landscape of the primitive streak. Development (Cambridge), 2010, 137, 2863-2874.	2.5	47
112	Systems Biology of Mammalian Circadian Clocks. Annual Review of Physiology, 2010, 72, 579-603.	13.1	187
113	Atypical Cadherins Dachsous and Fat Control Dynamics of Noncentrosomal Microtubules in Planar Cell Polarity. Developmental Cell, 2010, 19, 389-401.	7.0	134
114	CKIε/δ-dependent phosphorylation is a temperature-insensitive, period-determining process in the mammalian circadian clock. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15744-15749.	7.1	239
115	Temperature-insensitive reaction in the mammalian circadian clock. Sleep and Biological Rhythms, 2009, 7, 243-251.	1.0	0
116	Systems biology of mammalian circadian clocks. Neuroscience Research, 2009, 65, S22.	1.9	0
117	Measurement of internal body time by blood metabolomics. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9890-9895.	7.1	246
118	Genetic and Molecular Analysis of Wild-Derived Arrhythmic Mice. PLoS ONE, 2009, 4, e4301.	2.5	3
119	Systems Biology of Mammalian Circadian Clocks. , 2009, , 57-69.		0
120	JBIR-26, a Novel Natural Compound from Streptomyces sp. AK-AH76, Regulates Mammalian Circadian Clock. Journal of Antibiotics, 2008, 61, 756-758.	2.0	2
121	Thyrotrophin in the pars tuberalis triggers photoperiodic response. Nature, 2008, 452, 317-322.	27.8	444
122	Proof-by-synthesis of the transcriptional logic of mammalian circadian clocks. Nature Cell Biology, 2008, 10, 1154-1163.	10.3	99
123	Predicting Perfect Adaptation Motifs in Reaction Kinetic Networks. Journal of Physical Chemistry B, 2008, 112, 16752-16758.	2.6	54
124	Detection of a circadian enhancer in the mDbp promoter using prokaryotic transposon vector-based strategy. Nucleic Acids Research, 2008, 36, e23-e23.	14.5	20
125	Analysis and synthesis of high-amplitude Cis-elements in the mammalian circadian clock. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 14946-14951.	7.1	69
126	Single-cell gene profiling defines differential progenitor subclasses in mammalian neurogenesis. Development (Cambridge), 2008, 135, 3113-3124.	2.5	178

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127	Perturbational formulation of principal component analysis in molecular dynamics simulation. Physical Review E, 2008, 78, 046702.	2.1	9
128	1S3-6 MOLECULAR AND CELLULAR NETWORKS OF MAMMALIAN CIRCADIAN CLOCK REVEALED BY BIOLUMINESCENCE(1S3 The fundamental and developmental study of bioluminescence-the biological) Tj ETQq0	0 0 rgBT / 0.1	Overlock 10 0
	Butsuri, 2008, 48, S3.		
129	Desynchronization of Noisy Multi-cellular Clocks Underlies the Population-level Singularity Behavior of Mammalian Circadian Clock. AIP Conference Proceedings, 2007, , .	0.4	0
130	A functional genomics strategy reveals clockwork orange as a transcriptional regulator in the Drosophila circadian clock. Genes and Development, 2007, 21, 1687-1700.	5.9	150
131	Systems Biology of Mammalian Circadian Clocks. Cold Spring Harbor Symposia on Quantitative Biology, 2007, 72, 365-380.	1.1	38
132	Melanopsin-dependent photo-perturbation reveals desynchronization underlying the singularity of mammalian circadian clocks. Nature Cell Biology, 2007, 9, 1327-1334.	10.3	112
133	Microarrays. Methods in Molecular Biology, 2007, , 225-243.	0.9	5
134	Microarrays. Methods in Molecular Biology, 2007, 362, 245-264.	0.9	8
135	Systems biology flowering in the plant clock field. Molecular Systems Biology, 2006, 2, 60.	7.2	20
136	An improved single-cell cDNA amplification method for efficient high-density oligonucleotide microarray analysis. Nucleic Acids Research, 2006, 34, e42-e42.	14.5	341
137	Maintenance of self-renewal ability of mouse embryonic stem cells in the absence of DNA methyltransferases Dnmt1, Dnmt3a and Dnmt3b. Genes To Cells, 2006, 11, 805-814.	1.2	482
138	Feedback repression is required for mammalian circadian clock function. Nature Genetics, 2006, 38, 312-319.	21.4	344
139	The BMAL1 C terminus regulates the circadian transcription feedback loop. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 10074-10079.	7.1	106
140	System-level identification of transcriptional circuits underlying mammalian circadian clocks. Nature Genetics, 2005, 37, 187-192.	21.4	732
141	The Transcriptional Landscape of the Mammalian Genome. Science, 2005, 309, 1559-1563.	12.6	3,227
142	Molecular-timetable methods for detection of body time and rhythm disorders from single-time-point genome-wide expression profiles. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11227-11232.	7.1	120
143	Universality and flexibility in gene expression from bacteria to human. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 3765-3769.	7.1	139
144	Genome-wide Transcriptional Orchestration of Circadian Rhythms inDrosophila. Journal of Biological Chemistry, 2002, 277, 14048-14052.	3.4	236

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145	Theperiodgene and allochronic reproductive isolation inBactrocera cucurbitae. Proceedings of the Royal Society B: Biological Sciences, 2002, 269, 2467-2472.	2.6	70
146	Intercellular Coupling Mechanism for Synchronized and Noise-Resistant Circadian Oscillators. Journal of Theoretical Biology, 2002, 216, 501-512.	1.7	53
147	A transcription factor response element for gene expression during circadian night. Nature, 2002, 418, 534-539.	27.8	794
148	Robust Oscillations within the Interlocked Feedback Model of Drosophila Circadian Rhythm. Journal of Theoretical Biology, 2001, 210, 401-406.	1.7	136