Gene expression divergence recapitulates the developm

Nature 468, 811-814 DOI: 10.1038/nature09634

Citation Report

#	Article	IF	CITATIONS
2	Genomic hourglass. Nature, 2010, 468, 768-769.	13.7	22
3	Hot entanglement. Nature, 2010, 468, 769-770.	13.7	22
4	Origin of the fittest: link between emergent variation and evolutionary change as a critical question in evolutionary biology. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 1921-1929.	1.2	57
5	Mapping Gene Expression in Two Xenopus Species: Evolutionary Constraints and Developmental Flexibility. Developmental Cell, 2011, 20, 483-496.	3.1	187
6	Developmental Genetics and New Sequencing Technologies: The Rise of Nonmodel Organisms. Developmental Cell, 2011, 21, 65-76.	3.1	24
7	The evolution of layered protocol stacks leads to an hourglass-shaped architecture. Computer Communication Review, 2011, 41, 206-217.	1.5	27
8	Hourglass theory gets molecular approval. Nature Reviews Genetics, 2011, 12, 76-76.	7.7	9
9	Limb specialization in living marsupial and eutherian mammals: constraints on mammalian limb evolution. Journal of Mammalogy, 2011, 92, 1038-1049.	0.6	40
10	Animal egg as evolutionary innovation: a solution to the "embryonic hourglass―puzzle. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2011, 316B, 467-483.	0.6	35
11	The evolution of layered protocol stacks leads to an hourglass-shaped architecture. , 2011, , .		30
12	Transcriptome Data Analysis for Cell Culture Processes. , 2011, 127, 27-70.		2
13	Diversity in insect axis formation: two <i>orthodenticle</i> genes and <i>hunchback</i> act in anterior patterning and influence dorsoventral organization in the honeybee (<i>Apis mellifera</i>). Development (Cambridge), 2011, 138, 3497-3507.	1.2	36
14	Evolutionary crossroads in developmental biology: the tunicates. Development (Cambridge), 2011, 138, 2143-2152.	1.2	157
15	MicroRNA-Driven Developmental Remodeling in the Brain Distinguishes Humans from Other Primates. PLoS Biology, 2011, 9, e1001214.	2.6	198
16	Towards an Evolutionary Model of Transcription Networks. PLoS Computational Biology, 2011, 7, e1002064.	1.5	10
17	Novel Function of Distal-less as a Gap Gene during Spider Segmentation. PLoS Genetics, 2011, 7, e1002342.	1.5	50
18	A Conserved Developmental Patterning Network Produces Quantitatively Different Output in Multiple Species of Drosophila. PLoS Genetics, 2011, 7, e1002346.	1.5	51

19	An Excess of Gene Expression Divergence on the X Chromosome in Drosophila Embryos: Implications for the Faster-X Hypothesis. PLoS Genetics, 2012, 8, e1003200.	1.5		34
----	--	-----	--	----

	CITATION R	EPORT	
#	Article	IF	CITATIONS
20	Tempo and Mode in Evolution of Transcriptional Regulation. PLoS Genetics, 2012, 8, e1002432.	1.5	60
21	Systematic measurement of missmatch effect for designing inter-species microarray. , 2012, , .		0
22	What are the determinants of gene expression levels and breadths in the human genome?. Human Molecular Genetics, 2012, 21, 46-56.	1.4	38
23	The evolution of gene expression and the transcriptome–phenotype relationship. Seminars in Cell and Developmental Biology, 2012, 23, 222-229.	2.3	89
24	Plant â€~evo-devo' goes genomic: from candidate genes to regulatory networks. Trends in Plant Science, 2012, 17, 441-447.	4.3	24
25	The evolution of early animal embryos: conservation or divergence?. Trends in Ecology and Evolution, 2012, 27, 385-393.	4.2	106
26	A transcriptomic hourglass in plant embryogenesis. Nature, 2012, 490, 98-101.	13.7	184
27	Dynamics of enhancer chromatin signatures mark the transition from pluripotency to cell specification during embryogenesis. Genome Research, 2012, 22, 2043-2053.	2.4	219
28	A Phylotypic Stage for All Animals?. Developmental Cell, 2012, 22, 903-904.	3.1	28
29	lcy: an open bioimage informatics platform for extended reproducible research. Nature Methods, 2012, 9, 690-696.	9.0	1,280
30	Karl Ernst von Baer (1792-1876) and Evolution. International Journal of Developmental Biology, 2012, 56, 653-660.	0.3	13
31	Molecular determinants of marsupial limb integration and constraint. , 2012, , 257-278.		6
32	Developmental Milestones Punctuate Gene Expression in the Caenorhabditis Embryo. Developmental Cell, 2012, 22, 1101-1108.	3.1	207
33	The Body Plan Concept and Its Centrality in Evo-Devo. Evolution: Education and Outreach, 2012, 5, 219-230.	0.3	18
34	The phylotypic stage as a boundary of modular memory: non mechanistic perspective. Theory in Biosciences, 2012, 131, 31-42.	0.6	11
35	2011 William Allan Award: Development and Evolution 1. American Journal of Human Genetics, 2012, 90, 392-404.	2.6	12
36	<scp>R</scp> ussian comparative embryology takes form: a conceptual metamorphosis toward "evoâ€devo†Evolution & Development, 2012, 14, 9-19.	1.1	8
38	The histone chaperone ASF1 is essential for sexual development in the filamentous fungus <i>Sordaria macrospora</i> . Molecular Microbiology, 2012, 84, 748-765.	1.2	26

#	Article	IF	Citations
39	Comparative transcriptomics of early dipteran development. BMC Genomics, 2013, 14, 123.	1.2	41
40	New genes as drivers of phenotypic evolution. Nature Reviews Genetics, 2013, 14, 645-660.	7.7	313
41	Developmental Fate and Cellular Maturity Encoded in Human Regulatory DNA Landscapes. Cell, 2013, 154, 888-903.	13.5	329
43	von Baer's law for the ages: lost and found principles of developmental evolution. Trends in Genetics, 2013, 29, 712-722.	2.9	74
44	Deep conservation of <i>cis</i> -regulatory elements in metazoans. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20130020.	1.8	26
45	Transcription factor evolution in eukaryotes and the assembly of the regulatory toolkit in multicellular lineages. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E4858-66.	3.3	183
46	Rapid and Pervasive Changes in Genome-wide Enhancer Usage during Mammalian Development. Cell, 2013, 155, 1521-1531.	13.5	342
47	Hierarchical Bayesian modelling of gene expression time series across irregularly sampled replicates and clusters. BMC Bioinformatics, 2013, 14, 252.	1.2	77
48	Early patterning in a chondrichthyan model, the small spotted dogfish: towards the gnathostome ancestral state. Journal of Anatomy, 2013, 222, 56-66.	0.9	5
49	Morris Goodman's hominoid rate slowdown: The importance of being neutral. Molecular Phylogenetics and Evolution, 2013, 66, 569-574.	1.2	15
50	Identifying targets of the Sox domain protein Dichaete in the Drosophila CNS via targeted expression of dominant negative proteins. BMC Developmental Biology, 2013, 13, 1.	2.1	28
51	Conserved non-coding elements and <i>cis</i> regulation: actions speak louder than words. Development (Cambridge), 2013, 140, 1385-1395.	1.2	53
52	The pea aphid (Acyrthosiphon pisum) genome encodes two divergent early developmental programs. Developmental Biology, 2013, 377, 262-274.	0.9	27
53	Ontogeny repeats the phylogenetic recruitment of the cargo exporter cornichon into AMPA receptor signaling complexes. Molecular and Cellular Neurosciences, 2013, 56, 10-17.	1.0	15
54	The Hourglass and the Early Conservation Models—Co-Existing Patterns of Developmental Constraints in Vertebrates. PLoS Genetics, 2013, 9, e1003476.	1.5	73
55	The draft genomes of soft-shell turtle and green sea turtle yield insights into the development and evolution of the turtle-specific body plan. Nature Genetics, 2013, 45, 701-706.	9.4	409
56	The genomic determinants of genotype × environment interactions in gene expression. Trends in Genetics, 2013, 29, 479-487.	2.9	82
57	CONSTRAINTS ON MAMMALIAN FORELIMB DEVELOPMENT: INSIGHTS FROM DEVELOPMENTAL DISPARITY. Evolution; International Journal of Organic Evolution, 2013, 67, 3645-3652.	1.1	8

#	Article	IF	CITATIONS
60	The Impact of Gene Expression Variation on the Robustness and Evolvability of a Developmental Gene Regulatory Network. PLoS Biology, 2013, 11, e1001696.	2.6	71
61	Specialization of Gene Expression during Mouse Brain Development. PLoS Computational Biology, 2013, 9, e1003185.	1.5	29
62	Extensive Divergence of Transcription Factor Binding in Drosophila Embryos with Highly Conserved Gene Expression. PLoS Genetics, 2013, 9, e1003748.	1.5	93
63	Positive Selection in Nucleoporins Challenges Constraints on Early Expressed Genes in Drosophila Development. Genome Biology and Evolution, 2013, 5, 2231-2241.	1.1	11
64	Dictyostelium Development Shows a Novel Pattern of Evolutionary Conservation. Molecular Biology and Evolution, 2013, 30, 977-984.	3.5	17
65	Polyandry and sex-specific gene expression. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120047.	1.8	31
66	The mystery of extreme non-coding conservation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20130021.	1.8	71
67	Noncanonical expression of <i>caudal</i> during early embryogenesis in the pea aphid <i><scp>A</scp>cyrthosiphon pisum</i> : maternal <i>cad</i> â€driven posterior development is not conserved. Insect Molecular Biology, 2013, 22, 442-455.	1.0	10
68	Systems biomedical science. , 2013, , 107-127.		0
69	Temporal Gene Expression Variation Associated with Eyespot Size Plasticity in Bicyclus anynana. PLoS ONE, 2013, 8, e65830.	1.1	13
70	Naturally Occurring Deletions of Hunchback Binding Sites in the Even-Skipped Stripe 3+7 Enhancer. PLoS ONE, 2014, 9, e91924.	1.1	12
71	Exploring development and evolution on the tangled bank. , 0, , 151-172.		1
73	Conserved Temporal Patterns of MicroRNA Expression in Drosophila Support a Developmental Hourglass Model. Genome Biology and Evolution, 2014, 6, 2459-2467.	1.1	22
74	Contribution of transcription to animal early development. Transcription, 2014, 5, e967602.	1.7	6
75	Coordination of Wing and Whole-Body Development at Developmental Milestones Ensures Robustness against Environmental and Physiological Perturbations. PLoS Genetics, 2014, 10, e1004408.	1.5	28
76	Differential Responses to Wnt and PCP Disruption Predict Expression and Developmental Function of Conserved and Novel Genes in a Cnidarian. PLoS Genetics, 2014, 10, e1004590.	1.5	44
77	Automated annotation of developmental stages of <i>Drosophila</i> embryos in images containing spatial patterns of expression. Bioinformatics, 2014, 30, 266-273.	1.8	12
78	Evolution of H3K27me3-marked chromatin is linked to gene expression evolution and to patterns of gene duplication and diversification. Genome Research, 2014, 24, 1115-1124.	2.4	23

	CITATION	ICLF OK I	
#	Article	IF	Citations
79	Tempo and mode of regulatory evolution in <i>Drosophila</i> . Genome Research, 2014, 24, 797-808.	2.4	177
80	Fast-evolving microRNAs are highly expressed in the early embryo of <i>Drosophila virilis</i> . Rna, 2014, 20, 360-372.	1.6	40
81	The developmental hourglass model: a predictor of the basic body plan?. Development (Cambridge), 2014, 141, 4649-4655.	1.2	116
82	Reversion of developmental mode in insects: evolution from long germband to short germband in the polyembrionic wasp <i>Macrocentrus cingulum</i> Brischke. Evolution & Development, 2014, 16, 233-246.	1.1	21
83	Integrating the interactome and the transcriptome of Drosophila. BMC Bioinformatics, 2014, 15, 177.	1.2	4
84	Modeling Gene Expression Evolution with an Extended Ornstein–Uhlenbeck Process Accounting for Within-Species Variation. Molecular Biology and Evolution, 2014, 31, 201-211.	3.5	110
85	Comparison of <i>D. melanogaster</i> and <i>C. elegans</i> developmental stages, tissues, and cells by modENCODE RNA-seq data. Genome Research, 2014, 24, 1086-1101.	2.4	88
86	Transcript Length Mediates Developmental Timing of Gene Expression Across Drosophila. Molecular Biology and Evolution, 2014, 31, 2879-2889.	3.5	49
87	Differences in Growth Generate the Diverse Palate Shapes of New World Leaf-Nosed Bats (Order) Tj ETQq0 0 () rgBT/Overl	ock_{12} 10 Tf 50
88	Comparative epigenomics in distantly related teleost species identifies conserved <i>cis</i> -regulatory nodes active during the vertebrate phylotypic period. Genome Research, 2014, 24, 1075-1085.	2.4	47
89	Multiple developmental mechanisms regulate species-specific jaw size. Development (Cambridge), 2014, 141, 674-684.	1.2	54
90	Temporal Specification and Bilaterality of Human Neocortical Topographic Gene Expression. Neuron, 2014, 81, 321-332.	3.8	213
91	Comparative analysis of the transcriptome across distant species. Nature, 2014, 512, 445-448.	13.7	289
92	Coming of age: orphan genes in plants. Trends in Plant Science, 2014, 19, 698-708.	4.3	158
93	Transcriptomic insights into human brain evolution: acceleration, neutrality, heterochrony. Current Opinion in Genetics and Development, 2014, 29, 110-119.	1.5	27
94	The Evolutionary Origin of the Vertebrate Body Plan: The Problem of Head Segmentation. Annual Review of Genomics and Human Genetics, 2014, 15, 443-459.	2.5	21
95	Conservation of mRNA and Protein Expression during Development of C.Âelegans. Cell Reports, 2014, 6, 565-577.	2.9	98
96	Grand challenges in evolutionary developmental biology. Frontiers in Ecology and Evolution, 2015, 2, .	1.1	23

#	Article	IF	CITATIONS
97	Sex Bias and Maternal Contribution to Gene Expression Divergence in Drosophila Blastoderm Embryos. PLoS Genetics, 2015, 11, e1005592.	1.5	26
98	Comparative Transcriptomes and EVO-DEVO Studies Depending on Next Generation Sequencing. Computational and Mathematical Methods in Medicine, 2015, 2015, 1-10.	0.7	5
99	Gene Coexpression and Evolutionary Conservation Analysis of the Human Preimplantation Embryos. BioMed Research International, 2015, 2015, 1-11.	0.9	5
100	Reinforcing the Egg-Timer: Recruitment of Novel Lophotrochozoa Homeobox Genes to Early and Late Development in the Pacific Oyster. Genome Biology and Evolution, 2015, 7, 677-688.	1.1	42
101	Fossil and Transcriptomic Perspectives on the Origins and Success of Metazoan Multicellularity. Advances in Marine Genomics, 2015, , 31-46.	1.2	7
102	Taking the Middle Road. , 2015, , 203-236.		2
103	Genomic Perspectives of Transcriptional Regulation in Forebrain Development. Neuron, 2015, 85, 27-47.	3.8	136
104	A "Developmental Hourglass―in Fungi. Molecular Biology and Evolution, 2015, 32, 1556-1566.	3.5	61
105	An integrative analysis of TFBS-clustered regions reveals new transcriptional regulation models on the accessible chromatin landscape. Scientific Reports, 2015, 5, 8465.	1.6	41
106	Cis-Regulatory Mechanisms for Robust Olfactory Sensory Neuron Class-restricted Odorant Receptor Gene Expression in Drosophila. PLoS Genetics, 2015, 11, e1005051.	1.5	27
107	Phylogenetic ANOVA: The Expression Variance and Evolution Model for Quantitative Trait Evolution. Systematic Biology, 2015, 64, 695-708.	2.7	92
108	Lessons from modENCODE. Annual Review of Genomics and Human Genetics, 2015, 16, 31-53.	2.5	46
109	Evidence for Active Maintenance of Phylotranscriptomic Hourglass Patterns in Animal and Plant Embryogenesis. Molecular Biology and Evolution, 2015, 32, 1221-1231.	3.5	102
110	Fast Nonparametric Clustering of Structured Time-Series. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 383-393.	9.7	39
111	What to compare and how: Comparative transcriptomics for Evoâ€Devo. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2015, 324, 372-382.	0.6	63
112	Growing an Embryo from a Single Cell: A Hurdle in Animal Life: Figure 1 Cold Spring Harbor Perspectives in Biology, 2015, 7, a019042.	2.3	45
113	Multi-Species Network Inference Improves Gene Regulatory Network Reconstruction for Early Embryonic Development inDrosophila. Journal of Computational Biology, 2015, 22, 253-265.	0.8	15
114	"Crustacea†Comparative Aspects of Early Development. , 2015, , 39-61.		14

#	Article	IF	Citations
115	EvoDevo and Its Significance for Animal Evolution and Phylogeny. , 2015, , 1-23.		4
116	Comparative Analysis of Gene Regulatory Networks: From Network Reconstruction to Evolution. Annual Review of Cell and Developmental Biology, 2015, 31, 399-428.	4.0	170
117	How complexity increases in development: An analysis of the spatial–temporal dynamics of 1218 genes in Drosophila melanogaster. Developmental Biology, 2015, 405, 328-339.	0.9	7
118	Spatiotemporal transcriptomics reveals the evolutionary history of the endoderm germ layer. Nature, 2015, 519, 219-222.	13.7	160
119	Pluripotency in the light of the developmental hourglass. Biological Reviews, 2015, 90, 428-443.	4.7	6
120	Transcriptomics of developing embryos and organs: A raising tool for evo–devo. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2015, 324, 363-371.	0.6	41
121	Conceptual Change in Biology. Boston Studies in the Philosophy and History of Science, 2015, , .	0.4	15
122	Transcriptional Regulation During Zygotic Genome Activation in Zebrafish and Other Anamniote Embryos. Advances in Genetics, 2016, 95, 161-194.	0.8	18
123	Computational Detection of Stage-Specific Transcription Factor Clusters during Heart Development. Frontiers in Genetics, 2016, 7, 33.	1.1	11
125	Tet proteins enhance the developmental hourglass. Nature Genetics, 2016, 48, 345-347.	9.4	3
126	Recurrent mutation at the classical haptoglobin structural polymorphism. Nature Genetics, 2016, 48, 347-348.	9.4	4
127	Decoding transcriptional enhancers: Evolving from annotation to functional interpretation. Seminars in Cell and Developmental Biology, 2016, 57, 40-50.	2.3	11
128	Animal Evolution: Are Phyla Real?. Current Biology, 2016, 26, R424-R426.	1.8	23
129	Evolution and functions of Oct4 homologs in non-mammalian vertebrates. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2016, 1859, 770-779.	0.9	16
130	Origin and evolution of developmental enhancers in the mammalian neocortex. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2617-26.	3.3	95
131	Chromatin Control of Developmental Dynamics and Plasticity. Developmental Cell, 2016, 38, 610-620.	3.1	127
132	High expression of new genes in trochophore enlightening the ontogeny and evolution of trochozoans. Scientific Reports, 2016, 6, 34664.	1.6	32
133	The evolution of inflorescence diversity in the nightshades and heterochrony during meristem maturation. Genome Research, 2016, 26, 1676-1686.	2.4	51

#	Article	IF	CITATIONS
134	The ontology of organisms: Mechanistic modules or patterned processes?. Biology and Philosophy, 2016, 31, 639-662.	0.7	14
135	Integrated analysis of the Plasmodium species transcriptome. EBioMedicine, 2016, 7, 255-266.	2.7	55
136	Convergent occurrence of the developmental hourglass in plant and animal embryogenesis?. Annals of Botany, 2016, 117, 833-843.	1.4	14
137	Robust views on plasticity and biodiversity. Annals of Botany, 2016, 117, 693-697.	1.4	10
138	Density-Dependent Selection Revisited: Mechanisms Linking Explanantia and Explananda. Biological Theory, 2016, 11, 113-121.	0.8	5
139	Measuring Absolute RNA Copy Numbers at High Temporal Resolution Reveals Transcriptome Kinetics in Development. Cell Reports, 2016, 14, 632-647.	2.9	155
140	Transcriptomes of Plant Gametophytes Have a Higher Proportion of Rapidly Evolving and Young Genes than Sporophytes. Molecular Biology and Evolution, 2016, 33, 1669-1678.	3.5	37
141	Cap Gene Regulatory Dynamics Evolve along a Genotype Network. Molecular Biology and Evolution, 2016, 33, 1293-1307.	3.5	55
142	Advancements in zebrafish applications for 21st century toxicology. , 2016, 161, 11-21.		199
143	Evolutionâ€development congruence in pattern formation dynamics: Bifurcations in gene expression and regulation of networks structures. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2016, 326, 61-84.	0.6	27
144	Germ Cells are Made Semiotically Competent During Evolution. Biosemiotics, 2016, 9, 31-49.	0.8	0
145	The mid-developmental transition and the evolution of animal body plans. Nature, 2016, 531, 637-641.	13.7	231
146	(Why) Does Evolution Favour Embryogenesis?. Trends in Plant Science, 2016, 21, 562-573.	4.3	37
147	Post-embryonic Hourglass Patterns Mark Ontogenetic Transitions in Plant Development. Molecular Biology and Evolution, 2016, 33, 1158-1163.	3.5	22
148	Active DNA demethylation at enhancers during the vertebrate phylotypic period. Nature Genetics, 2016, 48, 417-426.	9.4	210
149	Large-scale gene expression study in the ophiuroid Amphiura filiformis provides insights into evolution of gene regulatory networks. EvoDevo, 2016, 7, 2.	1.3	44
150	MicroRNA evolution, expression, and function during short germband development in <i>Tribolium castaneum</i> . Genome Research, 2016, 26, 85-96.	2.4	42
151	Toward understanding the evolution of vertebrate gene regulatory networks: comparative genomics and epigenomic approaches. Briefings in Functional Genomics, 2016, 15, 315-321.	1.3	7

	CITATION	Report	
#	Article	IF	Citations
152	Aristotelian essentialism: essence in the age of evolution. SynthÃ^se, 2017, 194, 2539-2556.	0.6	29
153	Topologically associated domains: a successful scaffold for the evolution of gene regulation in animals. Wiley Interdisciplinary Reviews: Developmental Biology, 2017, 6, e265.	5.9	75
154	The "Biogenetic Law―in zoology: from Ernst Haeckel's formulation to current approaches. Theory in Biosciences, 2017, 136, 19-29.	0.6	34
155	Remaining questions related to the hourglass model in vertebrate evolution. Current Opinion in Genetics and Development, 2017, 45, 103-107.	1.5	20
156	The Philosophy of Biology. Analysis, 2017, 77, 412-432.	0.3	2
157	Evidence of an evolutionary hourglass pattern in herbivoryâ€induced transcriptomic responses. New Phytologist, 2017, 215, 1264-1273.	3.5	6
158	Evo-devo: Developmental constraints. Nature Ecology and Evolution, 2017, 1, 128.	3.4	0
159	Cross-kingdom comparison of the developmental hourglass. Current Opinion in Genetics and Development, 2017, 45, 69-75.	1.5	44
160	Transcriptomic insights into the genetic basis of mammalian limb diversity. BMC Evolutionary Biology, 2017, 17, 86.	3.2	19
161	The developmental proteome of <i>Drosophila melanogaster</i> . Genome Research, 2017, 27, 1273-1285.	2.4	135
162	Developmental constraints shape the evolution of the nematode mid-developmental transition. Nature Ecology and Evolution, 2017, 1, 113.	3.4	67
163	Establishment of the Vertebrate Germ Layers. Advances in Experimental Medicine and Biology, 2017, 953, 307-381.	0.8	20
164	Comparative Transcriptomics of Steinernema and Caenorhabditis Single Embryos Reveals Orthologous Gene Expression Convergence during Late Embryogenesis. Genome Biology and Evolution, 2017, 9, 2681-2696.	1.1	21
165	Constrained vertebrate evolution by pleiotropic genes. Nature Ecology and Evolution, 2017, 1, 1722-1730.	3.4	72
166	Parallel embryonic transcriptional programs evolve under distinct constraints and may enable morphological conservation amidst adaptation. Developmental Biology, 2017, 430, 202-213.	0.9	21
167	Maximizing Power in Phylogenetics and Phylogenomics: A Perspective Illuminated by Fungal Big Data. Advances in Genetics, 2017, 100, 1-47.	0.8	28
168	Transcriptomic signatures shaped by cell proportions shed light on comparative developmental biology. Genome Biology, 2017, 18, 29.	3.8	13
169	It's about time: studying gene regulatory programs across serial organs. Genome Biology, 2017, 18, 30.	3.8	0

#	Article	IF	CITATIONS
170	Developing an ancient epithelial appendage: FGF signalling regulates early tail denticle formation in sharks. EvoDevo, 2017, 8, 8.	1.3	27
171	Evo-devo: a science of dispositions. European Journal for Philosophy of Science, 2017, 7, 373-389.	0.6	14
172	Conserved noncoding transcription and core promoter regulatory code in early Drosophila development. ELife, 2017, 6, .	2.8	10
173	F-MAP: A Bayesian approach to infer the gene regulatory network using external hints. PLoS ONE, 2017, 12, e0184795.	1.1	4
174	Regulatory heterochronies and loose temporal scaling between sea star and sea urchin regulatory circuits. International Journal of Developmental Biology, 2017, 61, 347-356.	0.3	8
175	Using evolutionary genomics, transcriptomics, and systems biology to reveal gene networks underlying fungal development. Fungal Biology Reviews, 2018, 32, 249-264.	1.9	22
176	Comparative transcriptomics across 14 <i>Drosophila</i> species reveals signatures of longevity. Aging Cell, 2018, 17, e12740.	3.0	35
177	VSClust: feature-based variance-sensitive clustering of omics data. Bioinformatics, 2018, 34, 2965-2972.	1.8	22
179	Pairwise comparisons across species are problematic when analyzing functional genomic data. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E409-E417.	3.3	77
180	Embryonic lethality is not sufficient to explain hourglass-like conservation of vertebrate embryos. EvoDevo, 2018, 9, 7.	1.3	24
181	Parallel evolution of gene expression between trophic specialists despite divergent genotypes and morphologies. Evolution Letters, 2018, 2, 62-75.	1.6	32
182	Genomics and transcriptomics to study fruiting body development: An update. Fungal Biology Reviews, 2018, 32, 231-235.	1.9	21
183	Development and Evolution through the Lens of Global Gene Regulation. Trends in Genetics, 2018, 34, 11-20.	2.9	20
184	Mapping Selection within Drosophila melanogaster Embryo's Anatomy. Molecular Biology and Evolution, 2018, 35, 66-79.	3.5	13
185	Gene expression signatures of mating system evolution. Genome, 2018, 61, 287-297.	0.9	13
186	Gadolinium perturbs expression of skeletogenic genes, calcium uptake and larval development in phylogenetically distant sea urchin species. Aquatic Toxicology, 2018, 194, 57-66.	1.9	38
187	Heart enhancers with deeply conserved regulatory activity are established early in zebrafish development. Nature Communications, 2018, 9, 4977.	5.8	42
188	The phylum Vertebrata: a case for zoological recognition. Zoological Letters, 2018, 4, 32.	0.7	32

		CITATION REP	ORT	
#	Article		IF	CITATIONS
189	Support for the Dominance Theory in <i>Drosophila</i> Transcriptomes. Genetics, 2018, 210, 70	3-718.	1.2	8
190	Integrative functional genomic analysis of human brain development and neuropsychiatric risks. Science, 2018, 362, .		6.0	516
191	Spatiotemporal transcriptomic divergence across human and macaque brain development. Scien 2018, 362, .	ce,	6.0	279
192	Advances in the Use of Zebrafish in Developmental Toxicology: Linking Genetics, Behavior, and High-Throughput Testing Strategies. , 2018, , 298-326.			1
193	A two-level model for the role of complex and young genes in the formation of organism complex and new insights into the relationship between evolution and development. EvoDevo, 2018, 9, 2	ity 2.	1.3	12
194	Comparative Studies of Gene Expression Kinetics: Methodologies and Insights on Development a Evolution. Frontiers in Genetics, 2018, 9, 339.	nd	1.1	5
195	Gene expression variability across cells and species shapes innate immunity. Nature, 2018, 563, 1	97-202.	13.7	165
196	Adaptive Evolution of Animal Proteins over Development: Support for the Darwin Selection Opportunity Hypothesis of Evo-Devo. Molecular Biology and Evolution, 2018, 35, 2862-2872.		3.5	15
197	Development and Evolutionary Constraints in Animals. Annual Review of Ecology, Evolution, and Systematics, 2018, 49, 499-522.		3.8	26
198	Developmental Constraints on Genome Evolution in Four Bilaterian Model Species. Genome Biolo and Evolution, 2018, 10, 2266-2277.	gy	1.1	23
199	Molecular evolution across developmental time reveals rapid divergence in early embryogenesis. Evolution Letters, 2019, 3, 359-373.		1.6	16
202	How Do Developmental Programs Evolve?. Fascinating Life Sciences, 2019, , 73-106.		0.5	0
203	Emergence of Hierarchical Modularity in Evolving Networks Uncovered by Phylogenomic Analysis Evolutionary Bioinformatics, 2019, 15, 117693431987298.		0.6	11
204	Long Noncoding RNAs and Repetitive Elements: Junk or Intimate Evolutionary Partners?. Trends in Genetics, 2019, 35, 892-902.		2.9	107
205	How Weird is The Worm? Evolution of the Developmental Gene Toolkit in Caenorhabditis elegans Journal of Developmental Biology, 2019, 7, 19.	;.	0.9	7
206	Reconstructing the Transcriptional Ontogeny of Maize and Sorghum Supports an Inverse Hourgla Model of Inflorescence Development. Current Biology, 2019, 29, 3410-3419.e3.	ISS	1.8	40
208	Gene expression across mammalian organ development. Nature, 2019, 571, 505-509.		13.7	490
209	The maternal-to-zygotic transition revisited. Development (Cambridge), 2019, 146, .		1.2	267

#	Article	IF	CITATIONS
210	Quantitative Comparison of the Anterior-Posterior Patterning System in the Embryos of Five <i>Drosophila</i> Species. G3: Genes, Genomes, Genetics, 2019, 9, 2171-2182.	0.8	9
211	Quantifying the extent of morphological homoplasy: A phylogenetic analysis of 490 characters in Drosophila. Evolution Letters, 2019, 3, 286-298.	1.6	15
212	Frequent nonrandom shifts in the temporal sequence of developmental landmark events during teleost evolutionary diversification. Evolution & Development, 2019, 21, 120-134.	1.1	2
213	Adaptation and Conservation throughout the Drosophila melanogaster Life-Cycle. Genome Biology and Evolution, 2019, 11, 1463-1482.	1.1	13
214	Gene Expression Does Not Support the Developmental Hourglass Model in Three Animals with Spiralian Development. Molecular Biology and Evolution, 2019, 36, 1373-1383.	3.5	17
215	Heterochronic shifts and conserved embryonic shape underlie crocodylian craniofacial disparity and convergence. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20182389.	1.2	52
216	Attachment of the blastoderm to the vitelline envelope affects gastrulation of insects. Nature, 2019, 568, 395-399.	13.7	95
217	Drift and Directional Selection Are the Evolutionary Forces Driving Gene Expression Divergence in Eye and Brain Tissue of <i>Heliconius</i> Butterflies. Genetics, 2019, 213, 581-594.	1.2	29
218	Developmental transcriptomes of the sea star, Patiria miniata, illuminate how gene expression changes with evolutionary distance. Scientific Reports, 2019, 9, 16201.	1.6	15
219	On the Regulatory Evolution of New Genes Throughout Their Life History. Molecular Biology and Evolution, 2019, 36, 15-27.	3.5	24
220	A quantitative framework for characterizing the evolutionary history of mammalian gene expression. Genome Research, 2019, 29, 53-63.	2.4	78
221	Deep Residual Neural Networks Resolve Quartet Molecular Phylogenies. Molecular Biology and Evolution, 2020, 37, 1495-1507.	3.5	32
222	Genomic insights of body plan transitions from bilateral to pentameral symmetry in Echinoderms. Communications Biology, 2020, 3, 371.	2.0	34
223	Systematic comparison of sea urchin and sea star developmental gene regulatory networks explains how novelty is incorporated in early development. Nature Communications, 2020, 11, 6235.	5.8	41
224	Character identity mechanisms: a conceptual model for comparative-mechanistic biology. Biology and Philosophy, 2020, 35, 1.	0.7	37
225	Inter-embryo gene expression variability recapitulates the hourglass pattern of evo-devo. BMC Biology, 2020, 18, 129.	1.7	23
226	Genome-wide variation and transcriptional changes in diverse developmental processes underlie the rapid evolution of seasonal adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 23960-23969.	3.3	53
227	Homeostatic maintenance and age-related functional decline in the Drosophila ear. Scientific Reports, 2020, 10, 7431.	1.6	18

#	Article	IF	CITATIONS
228	Toward understanding of evolutionary constraints: experimental and theoretical approaches. Biophysical Reviews, 2020, 12, 1155-1161.	1.5	9
229	Comparative Transcriptomics across Nematode Life Cycles Reveal Gene Expression Conservation and Correlated Evolution in Adjacent Developmental Stages. Genome Biology and Evolution, 2020, 12, 1019-1030.	1.1	15
230	Transposable elements as a potent source of diverse <i>cis</i> -regulatory sequences in mammalian genomes. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190347.	1.8	141
231	On the origin of vertebrate body plan: Insights from the endoderm using the hourglass model. Gene Expression Patterns, 2020, 37, 119125.	0.3	2
232	Estimating Phylogenies from Shape and Similar Multidimensional Data: Why It Is Not Reliable. Systematic Biology, 2020, 69, 863-883.	2.7	15
233	Using Single-Cell and Spatial Transcriptomes to Understand Stem Cell Lineage Specification During Early Embryo Development. Annual Review of Genomics and Human Genetics, 2020, 21, 163-181.	2.5	31
234	Whole-Genome and RNA Sequencing Reveal Variation and Transcriptomic Coordination in the Developing Human Prefrontal Cortex. Cell Reports, 2020, 31, 107489.	2.9	91
235	Learning Retention Mechanisms and Evolutionary Parameters of Duplicate Genes from Their Expression Data. Molecular Biology and Evolution, 2021, 38, 1209-1224.	3.5	8
236	Embryo-Like Features in Developing <i>Bacillus subtilis</i> Biofilms. Molecular Biology and Evolution, 2021, 38, 31-47.	3.5	25
237	The new chimeric chiron genes evolved essential roles in zebrafish embryonic development by regulating NAD+ levels. Science China Life Sciences, 2021, 64, 1929-1948.	2.3	6
238	Life's Attractors Continued: Progress in Understanding Developmental Systems Through Reverse Engineering and In Silico Evolution. , 2021, , 59-88.		0
239	The Developmental Hourglass in the Evolution of Embryogenesis. , 2021, , 111-120.		0
240	The developmental hourglass model and recapitulation: An attempt to integrate the two models. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2022, 338, 76-86.	0.6	10
241	Dynamical systems approach to evolution–development congruence: Revisiting Haeckel's recapitulation theory. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2022, 338, 62-75.	0.6	4
242	Developmental hourglass and heterochronic shifts in fin and limb development. ELife, 2021, 10, .	2.8	10
243	Comparative studies on speciation: 30 years since Coyne and Orr. Evolution; International Journal of Organic Evolution, 2021, 75, 764-778.	1.1	48
244	The biogenetic law and the Gastraea theory: From Ernst Haeckel's discoveries to contemporary views. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2021, , .	0.6	12
246	Heart Enhancers: Development and Disease Control at a Distance. Frontiers in Genetics, 2021, 12, 642975.	1.1	4

#	Article	IF	CITATIONS
247	Measuring potential effects of the developmental burden associated with the vertebrate notochord. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2022, 338, 129-136.	0.6	4
248	Enhancer grammar in development, evolution, and disease: dependencies and interplay. Developmental Cell, 2021, 56, 575-587.	3.1	81
249	Learning gene regulatory networks using gaussian process emulator and graphical LASSO. Journal of Bioinformatics and Computational Biology, 2021, 19, 2150007.	0.3	0
250	Cancer progression as a sequence of atavistic reversions. BioEssays, 2021, 43, e2000305.	1.2	37
252	The cell in the age of the genomic revolution: Cell Regulatory Networks. Cells and Development, 2021, 168, 203720.	0.7	7
253	The hourglass model of evolutionary conservation during embryogenesis extends to developmental enhancers with signatures of positive selection. Genome Research, 2021, 31, 1573-1581.	2.4	9
254	Studying evolution of the primary body axis in vivo and in vitro. ELife, 2021, 10, .	2.8	17
255	Convergent Usage of Amino Acids in Human Cancers as A Reversed Process of Tissue Development. Genomics, Proteomics and Bioinformatics, 2022, 20, 147-162.	3.0	1
258	Entrenchment as a Theoretical Tool in Evolutionary Developmental Biology. Boston Studies in the Philosophy and History of Science, 2015, , 365-402.	0.4	12
259	Camouflage Variations on a Theme of the Nymphalid Ground Plan. , 2017, , 39-58.		3
271	An explanatory evo-devo model for the developmental hourglass. F1000Research, 2014, 3, 156.	0.8	7
272	An explanatory evo-devo model for the developmental hourglass. F1000Research, 2014, 3, 156.	0.8	16
273	Comparative Developmental Transcriptomics Reveals Rewiring of a Highly Conserved Gene Regulatory Network during a Major Life History Switch in the Sea Urchin Genus Heliocidaris. PLoS Biology, 2016, 14, e1002391.	2.6	78
274	DREISS: Using State-Space Models to Infer the Dynamics of Gene Expression Driven by External and Internal Regulatory Networks. PLoS Computational Biology, 2016, 12, e1005146.	1.5	6
275	Variability of Gene Expression Identifies Transcriptional Regulators of Early Human Embryonic Development. PLoS Genetics, 2015, 11, e1005428.	1.5	45
276	A Comparative Analysis of Transcription Factor Expression during Metazoan Embryonic Development. PLoS ONE, 2013, 8, e66826.	1.1	31
277	A conserved set of maternal genes? Insights from a molluscan transcriptome. International Journal of Developmental Biology, 2014, 58, 501-511.	0.3	28
278	Quantitative system drift compensates for altered maternal inputs to the gap gene network of the scuttle fly Megaselia abdita. ELife, 2015, 4, .	2.8	68

		ON REPORT	
#	Article	IF	CITATIONS
279	Constraint and divergence of global gene expression in the mammalian embryo. ELife, 2015, 4, e05538.	2.8	3
280	Extensive intraspecies cryptic variation in an ancient embryonic gene regulatory network. ELife, 2019, 8, .	2.8	19
281	Speciation and the developmental alarm clock. ELife, 2020, 9, .	2.8	25
282	OUP accepted manuscript. Bioinformatics, 2021, , .	1.8	0
283	Lineage-Specific Genes and Family Expansions in Dictyostelid Genomes Display Expression Bias and Evolutionary Diversification during Development. Genes, 2021, 12, 1628.	1.0	9
284	The Evolution of Layered Protocol Stacks Leads to an Hourglass-Shaped Architecture. Modeling and Simulation in Science, Engineering and Technology, 2013, , 55-88.	0.4	0
288	Evo-devo and the Evolution of Marine Larvae: From the Modern World to the Dawn of the Metazoa. Boston Studies in the Philosophy and History of Science, 2015, , 243-258.	0.4	1
305	Hourglass or Twisted Ribbon?. Results and Problems in Cell Differentiation, 2019, 68, 21-29.	0.2	0
306	The Developmental Hourglass in the Evolution of Embryogenesis. , 2019, , 1-10.		1
308	How Do Gene Networks Promote Morphological Evolution. Fascinating Life Sciences, 2019, , 209-234.	0.5	0
320	Histone H3K27 Methylation Perturbs Transcriptional Robustness and Underpins Dispensability of Highly Conserved Genes in Fungi. Molecular Biology and Evolution, 2022, 39, .	3.5	4
323	Derivedness Index for Estimating Degree of Phenotypic Evolution of Embryos: A Study of Comparative Transcriptomic Analyses of Chordates and Echinoderms. Frontiers in Cell and Developmental Biology, 2021, 9, 749963.	1.8	3
324	Von Baer, the intensification of uniqueness, and historical explanation. History and Philosophy of the Life Sciences, 2021, 43, 122.	0.6	3
325	Beyond recapitulation: Past, present, and future. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2022, 338, 9-12.	0.6	1
326	The Toggle Switch Model for Gene Expression Change during the Prenatal-to-Postnatal Transition in Mammals. Molecular Biology and Evolution, 2022, 39, .	3.5	2
327	The Tempo of Mammalian Embryogenesis: Variation in the Pace of Brain and Body Development. Brain, Behavior and Evolution, 2022, 97, 96-107.	0.9	6
328	Body Plan Identity: A Mechanistic Model. Evolutionary Biology, 2022, 49, 123-141.	0.5	7
329	Distinguishing Evolutionary Conservation from Derivedness. Life, 2022, 12, 440.	1.1	1

#	Article	IF	CITATIONS
330	The (unusual) heuristic value of Hox gene clusters; a matter of time?. Developmental Biology, 2022, 484, 75-87.	0.9	17
331	Potential contribution of intrinsic developmental stability toward body plan conservation. BMC Biology, 2022, 20, 82.	1.7	6
332	Detecting signatures of selection on gene expression. Nature Ecology and Evolution, 2022, 6, 1035-1045.	3.4	37
333	Ontogeny, Phylotypic Periods, Paedomorphosis, and Ontogenetic Systematics. Frontiers in Ecology and Evolution, 2022, 10, .	1.1	1
336	Real age prediction from the transcriptome with RAPToR. Nature Methods, 2022, 19, 969-975.	9.0	12
339	General Rules of Brain Morphogenesis in Vertebrates: An Hourglass Model. , 2022, , 15-28.		0
340	Stochastic Modeling of Gene Expression Evolution Uncovers Tissue- and Sex-Specific Properties of Expression Evolution in the <i>Drosophila</i> Genus. Journal of Computational Biology, 2023, 30, 21-40.	0.8	3
341	Multilevel Organismal Diversity in an Ontogenetic Framework as a Solution for the Species Concept. , 2022, , 78-129.		4
342	Lineage-specific, fast-evolving GATA-like gene regulates zygotic gene activation to promote endoderm specification and pattern formation in the Theridiidae spider. BMC Biology, 2022, 20, .	1.7	5
343	Measurement and meaning in gene expression evolution. , 2023, , 111-129.		2
344	Dirichlet process mixture of Gaussian process functional regressions and its variational EM algorithm. Pattern Recognition, 2023, 134, 109129.	5.1	7
346	Nematode gene annotation by machine-learning-assisted proteotranscriptomics enables proteome-wide evolutionary analysis. Genome Research, 2023, 33, 112-128.	2.4	1
347	Phenotypic evolution as an Ornstein-Uhlenbeck process: The effect of environmental variation and phenotypic plasticity. Physical Review E, 2023, 107, .	0.8	0
348	Stability in gene expression and body-plan development leads to evolutionary conservation. EvoDevo, 2023, 14, .	1.3	2
349	FGF signaling promotes spreading of fat body precursors necessary for adult adipogenesis in Drosophila. PLoS Biology, 2023, 21, e3002050.	2.6	0
350	Essay: Collections of Deformable Particles Present Exciting Challenges for Soft Matter and Biological Physics. Physical Review Letters, 2023, 130, .	2.9	8

Ontogenetic trajectories and early shape differentiation of treehopper pronota (Hemiptera:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 102 T