Olivier Pourquie

List of Publications by Year
in descending order

150 papers	14,335 citations	20797 60 h-index	22147 113 g-index
188 all docs	188 docs citations	188 times ranked	9941 citing authors

#	Article	IF	Citations
1	Avian hairy Gene Expression Identifies a Molecular Clock Linked to Vertebrate Segmentation and Somitogenesis. Cell, 1997, 91, 639-648.	13.5	880
2	FGF Signaling Controls Somite Boundary Position and Regulates Segmentation Clock Control of Spatiotemporal Hox Gene Activation. Cell, 2001, 106, 219-232.	13.5	628
3	Making muscle: skeletal myogenesis<i>in vivo</i>and<i>in vitro</i>. Development (Cambridge), 2017, 144, 2104-2122.	1.2	577
4	The Segmentation Clock: Converting Embryonic Time into Spatial Pattern. Science, 2003, 301, 328-330.	6.0	487
5	A Complex Oscillating Network of Signaling Genes Underlies the Mouse Segmentation Clock. Science, 2006, 314, 1595-1598.	6.0	418
6	Control of segment number in vertebrate embryos. Nature, 2008, 454, 335-339.	13.7	398
7	Maintenance of neuroepithelial progenitor cells by Deltaâ€“Notch signalling in the embryonic chick retina. Current Biology, 1997, 7, 661-670.	1.8	394
8	Lateral and Axial Signals Involved in Avian Somite Patterning: A Role for BMP4. Cell, 1996, 84, 461-471.	13.5	390
9	fgf8 mRNA decay establishes a gradient that couples axial elongation to patterning in the vertebrate embryo. Nature, 2004, 427, 419-422.	13.7	380
10	Differentiation of pluripotent stem cells to muscle fiber to model Duchenne muscular dystrophy. Nature Biotechnology, 2015, 33, 962-969.	9.4	339
11	Segmental patterning of the vertebrate embryonic axis. Nature Reviews Genetics, 2008, 9, 370-382.	7.7	331
12	Signalling dynamics in vertebrate segmentation. Nature Reviews Molecular Cell Biology, 2014, 15, 709-721.	16.1	317
13	Vertebrate Segmentation: From Cyclic Gene Networks to Scoliosis. Cell, 2011, 145, 650-663.	13.5	306
14	A random cell motility gradient downstream of FGF controls elongation of an amniote embryo. Nature, 2010, 466, 248-252.	13.7	289
15	A Î²-catenin gradient links the clock and wavefront systems in mouse embryo segmentation. Nature Cell Biology, 2008, 10, 186-193.	4.6	286
16	The lunatic Fringe gene is a target of the molecular clock linked to somite segmentation in avian embryos. Current Biology, 1998, 8, 979-982.	1.8	247
17	Retinoic acid coordinates somitogenesis and leftâ€“right patterning in vertebrate embryos. Nature, 2005, 435, 215-220.	13.7	239
18	Vertebrate Somitogenesis. Annual Review of Cell and Developmental Biology, 2001, 17, 311-350.	4.0	234

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19	Generation of human muscle fibers and satellite-like cells from human pluripotent stem cells in vitro. Nature Protocols, 2016, 11, 1833-1850.	5.5	215
20	Signaling Gradients during Paraxial Mesoderm Development. Cold Spring Harbor Perspectives in Biology, 2010, 2, a000869-a000869.	2.3	205
21	Collinear activation of Hoxb genes during gastrulation is linked to mesoderm cell ingression. Nature, 2006, 442, 568-571.	13.7	196
22	Coupling segmentation to axis formation. Development (Cambridge), 2004, 131, 5783-5793.	1.2	183
23	New protease inhibitors prevent Î³-secretase-mediated production of AÎ²40/42 without affecting Notch cleavage. Nature Cell Biology, 2001, 3, 507-511.	4.6	181
24	Evolutionary plasticity of segmentation clock networks. Development (Cambridge), 2011, 138, 2783-2792.	1.2	166
25	Control of the segmentation process by graded MAPK/ERK activation in the chick embryo. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11343-11348.	3.3	165
26	Modeling the segmentation clock as a network of coupled oscillations in the Notch, Wnt and FGF signaling pathways. Journal of Theoretical Biology, 2008, 252, 574-585.	0.8	162
27	FGF signaling acts upstream of the NOTCH and WNT signaling pathways to control segmentation clock oscillations in mouse somitogenesis. Development (Cambridge), 2007, 134, 4033-4041.	1.2	161
28	Changes in Hox genesâ€™ structure and function during the evolution of the squamate body plan. Nature, 2010, 464, 99-103.	13.7	160
29	A Gradient of Glycolytic Activity Coordinates FGF and Wnt Signaling during Elongation of the Body Axis in Amniote Embryos. Developmental Cell, 2017, 40, 342-353.e10.	3.1	156
30	In vitro characterization of the human segmentation clock. Nature, 2020, 580, 113-118.	13.7	152
31	Abnormal vertebral segmentation and the notch signaling pathway in man. Developmental Dynamics, 2007, 236, 1456-1474.	0.8	143
32	Oscillating Expression of c-Hey2 in the Presomitic Mesoderm Suggests That the Segmentation Clock May Use Combinatorial Signaling through Multiple Interacting bHLH Factors. Developmental Biology, 2000, 227, 91-103.	0.9	139
33	Oscillations of the Snail Genes in the Presomitic Mesoderm Coordinate Segmental Patterning and Morphogenesis in Vertebrate Somitogenesis. Developmental Cell, 2006, 10, 355-366.	3.1	138
34	Induction of oligodendrocyte progenitors in the trunk neural tube by ventralizing signals: effects of notochord and floor plate grafts, and of sonic hedgehog. Mechanisms of Development, 1996, 60, 13-32.	1.7	136
35	Formation and Segmentation of the Vertebrate Body Axis. Annual Review of Cell and Developmental Biology, 2013, 29, 1-26.	4.0	133
36	Sharp developmental thresholds defined through bistability by antagonistic gradients of retinoic acid and FGF signaling. Developmental Dynamics, 2007, 236, 1495-1508.	0.8	126

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37	Excitable Dynamics and Yap-Dependent Mechanical Cues Drive the Segmentation Clock. Cell, 2017, 171, 668-682.e11.	13.5	117
38	<i>Hox</i>genes in time and space during vertebrate body formation. Development Growth and Differentiation, 2007, 49, 265-275.	0.6	115
39	Oscillating signaling pathways during embryonic development. Current Opinion in Cell Biology, 2008, 20, 632-637.	2.6	106
40	Hox genes control vertebrate body elongation by collinear Wnt repression. ELife, 2015, 4, .	2.8	106
41	Rere controls retinoic acid signalling and somite bilateral symmetry. Nature, 2010, 463, 953-957.	13.7	103
42	A Nomenclature for Prospective Somites and Phases of Cyclic Gene Expression in the Presomitic Mesoderm. Developmental Cell, 2001, 1, 619-620.	3.1	101
43	Axon fasciculation defects and retinal dysplasias in mice lacking the immunoglobulin superfamily adhesion molecule BEN/ALCAM/SC1. Molecular and Cellular Neurosciences, 2004, 27, 59-69.	1.0	100
44	Intracellular pH controls WNT downstream of glycolysis in amniote embryos. Nature, 2020, 584, 98-101.	13.7	95
45	SarcTrack. Circulation Research, 2019, 124, 1172-1183.	2.0	94
46	A clock-work somite. BioEssays, 2000, 22, 72-83.	1.2	92
47	Incomplete penetrance and phenotypic variability characterize Gdf6-attributable oculo-skeletal phenotypes. Human Molecular Genetics, 2009, 18, 1110-1121.	1.4	92
48	The chick embryo: a leading model in somitogenesis studies. Mechanisms of Development, 2004, 121, 1069-1079.	1.7	89
49	Uncoupling segmentation and somitogenesis in the chick presomitic mesoderm. , 1998, 23, 77-85.		87
50	BEN As a Presumptive Target Recognition Molecule during the Development of the Olivocerebellar System. Journal of Neuroscience, 1996, 16, 3296-3310.	1.7	86
51	Synchronised cycling gene oscillations in presomitic mesoderm cells require cell-cell contact. International Journal of Developmental Biology, 2005, 49, 309-315.	0.3	86
52	<i>In Situ</i> Printing of Adhesive Hydrogel Scaffolds for the Treatment of Skeletal Muscle Injuries. ACS Applied Bio Materials, 2020, 3, 1568-1579.	2.3	86
53	Developmental control of segment numbers in vertebrates. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2009, 312B, 533-544.	0.6	80
54	Chapter 7 Establishment of Hox Vertebral Identities in the Embryonic Spine Precursors. Current Topics in Developmental Biology, 2009, 88, 201-234.	1.0	80

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55	Mutations in the MESP2 Gene Cause Spondylothoracic Dysostosis/Jarcho-Levin Syndrome. American Journal of Human Genetics, 2008, 82, 1334-1341.	2.6	79
56	Dual mode of paraxial mesoderm formation during chick gastrulation. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2744-2749.	3.3	70
57	Progress in the Understanding of the Genetic Etiology of Vertebral Segmentation Disorders in Humans. Annals of the New York Academy of Sciences, 2009, 1151, 38-67.	1.8	70
58	A relative shift in cloacal location repositions external genitalia in amniote evolution. Nature, 2014, 516, 391-394.	13.7	70
59	Somitogenesis: segmenting a vertebrate. Current Opinion in Genetics and Development, 1998, 8, 487-493.	1.5	68
60	Notch around the clock. Current Opinion in Genetics and Development, 1999, 9, 559-565.	1.5	66
61	A molecular clock involved in Somite segmentation. Current Topics in Developmental Biology, 2001, 51, 221-248.	1.0	66
62	Mechanical Coupling Coordinates the Co-elongation of Axial and Paraxial Tissues in Avian Embryos. Developmental Cell, 2020, 55, 354-366.e5.	3.1	65
63	Somite formation and patterning. International Review of Cytology, 2000, 198, 1-65.	6.2	61
64	GENETICS: Chicken Genome--Science Nuggets to Come Soon. Science, 2003, 300, 1669-1669.	6.0	61
65	Sex-dimorphic gene expression and ineffective dosage compensation of Z-linked genes in gastrulating chicken embryos. BMC Genomics, 2010, 11, 13.	1.2	61
66	Independent regulation of vertebral number and vertebral identity by microRNA-196 paralogs. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E4884-93.	3.3	60
67	Multiscale quantification of tissue behavior during amniote embryo axis elongation. Development (Cambridge), 2017, 144, 4462-4472.	1.2	60
68	The Lin28/let-7 Pathway Regulates the Mammalian Caudal Body Axis Elongation Program. Developmental Cell, 2019, 48, 396-405.e3.	3.1	60
69	Expression of Genes (CAPN3, SGCA, SGCB, and TTN) Involved in Progressive Muscular Dystrophies during Early Human Development. Genomics, 1998, 48, 145-156.	1.3	59
70	The vertebrate segmentation clock: the tip of the iceberg. Current Opinion in Genetics and Development, 2008, 18, 317-323.	1.5	59
71	From head to tail: links between the segmentation clock and antero-posterior patterning of the embryo. Current Opinion in Genetics and Development, 2002, 12, 519-523.	1.5	56
72	Recapitulating early development of mouse musculoskeletal precursors of the paraxial mesoderm <i>in vitro</i>. Development (Cambridge), 2018, 145, .	1.2	53

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73	Bioinks and Bioprinting Strategies for Skeletal Muscle Tissue Engineering. Advanced Materials, 2022, 34, e2105883.	11.1	53
74	Vertebrate somitogenesis: a novel paradigm for animal segmentation?. International Journal of Developmental Biology, 2003, 47, 597-603.	0.3	53
75	The vertebrate segmentation clock. Journal of Anatomy, 2001, 199, 169-175.	0.9	51
76	Timed Collinear Activation of Hox Genes during Gastrulation Controls the Avian Forelimb Position. Current Biology, 2019, 29, 35-50.e4.	1.8	50
77	3 Segmentation of the Paraxial Mesoderm and Vertebrate Somitogenesis. Current Topics in Developmental Biology, 1999, 47, 81-105.	1.0	48
78	Lighting up developmental mechanisms: how fluorescence imaging heralded a new era. Development (Cambridge), 2010, 137, 373-387.	1.2	47
79	Synthesis of new 3-alkoxy-7-amino-4-chloro-isocoumarin derivatives as new Î²-amyloid peptide production inhibitors and their activities on various classes of protease. Bioorganic and Medicinal Chemistry, 2003, 11, 3141-3152.	1.4	44
80	Mechanics of Anteroposterior Axis Formation in Vertebrates. Annual Review of Cell and Developmental Biology, 2019, 35, 259-283.	4.0	43
81	Exploring the Influence of Cell Metabolism on Cell Fate through Protein Post-translational Modifications. Developmental Cell, 2020, 54, 282-292.	3.1	42
82	Comparison of Pattern Detection Methods in Microarray Time Series of the Segmentation Clock. PLoS ONE, 2008, 3, e2856.	1.1	38
83	Spatiotemporal compartmentalization of key physiological processes during muscle precursor differentiation. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4224-4229.	3.3	37
84	Differentiation of the human PAX7-positive myogenic precursors/satellite cell lineage <i>in vitro</i>. Development (Cambridge), 2020, 147, .	1.2	37
85	In vivo analysis of mRNA stability using the Tet-Off system in the chicken embryo. Developmental Biology, 2005, 284, 292-300.	0.9	35
86	Bioelectrical domain walls in homogeneous tissues. Nature Physics, 2020, 16, 357-364.	6.5	35
87	Prednisolone rescues Duchenne muscular dystrophy phenotypes in human pluripotent stem cellâ€"derived skeletal muscle in vitro. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	32
88	Dynamics of primitive streak regression controls the fate of neuromesodermal progenitors in the chicken embryo. ELife, 2021, 10, .	2.8	31
89	On periodicity and directionality of somitogenesis. Anatomy and Embryology, 2006, 211, 3-8.	1.5	30
90	BEN, a novel surface molecule of the immunoglobulin superfamily on avian hemopoietic progenitor cells shared with neural cells. Experimental Cell Research, 1992, 203, 91-99.	1.2	29

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91	Clocks regulating developmental processes. Current Opinion in Neurobiology, 1998, 8, 665-670.	2.0	28
92	Skin development: Delta laid bare. Current Biology, 2000, 10, R425-R428.	1.8	27
93	<i>PAPC</i> couples the segmentation clock to somite morphogenesis by regulating N-cadherin dependent adhesion. Development (Cambridge), 2017, 144, 664-676.	1.2	27
94	The WHHERE coactivator complex is required for retinoic acid-dependent regulation of embryonic symmetry. Nature Communications, 2017, 8, 728.	5.8	27
95	Patterning with clocks and genetic cascades: Segmentation and regionalization of vertebrate versus insect body plans. PLoS Genetics, 2021, 17, e1009812.	1.5	27
96	Paraxial mesoderm organoids model development of human somites. ELife, 2022, 11, .	2.8	27
97	Segmentation clock: insights from computational models. Current Biology, 2003, 13, R632-R634.	1.8	26
98	An antigen expressed by avian neuronal cells is also expressed by activated T lymphocytes. Cellular Immunology, 1992, 141, 99-110.	1.4	25
99	Chapter 13 Manipulation and Electroporation of the Avian Segmental Plate and Somites In Vitro. Methods in Cell Biology, 2008, 87, 257-270.	0.5	25
100	Manteia, a predictive data mining system for vertebrate genes and its applications to human genetic diseases. Nucleic Acids Research, 2014, 42, D882-D891.	6.5	25
101	The Long Road to Making Muscle In Vitro. Current Topics in Developmental Biology, 2018, 129, 123-142.	1.0	24
102	A new canon. Nature, 2005, 433, 208-209.	13.7	20
103	Retinoic acid. Current Biology, 2008, 18, R191-R192.	1.8	20
104	Somite formation in the chicken embryo. International Journal of Developmental Biology, 2018, 62, 57-62.	0.3	20
105	A macho way to make muscles. Nature, 2001, 409, 679-680.	13.7	17
106	Cyclic <i>Nrarp</i> mRNA expression is regulated by the somitic oscillator but Nrarp protein levels do not oscillate. Developmental Dynamics, 2009, 238, 3043-3055.	0.8	16
107	Integrative Data Mining Highlights Candidate Genes for Monogenic Myopathies. PLoS ONE, 2014, 9, e110888.	1.1	16
108	Vertebrate segmentation: is cycling the rule?. Current Opinion in Cell Biology, 2000, 12, 747-751.	2.6	15

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109	In vitro systems: A new window to the segmentation clock. Development Growth and Differentiation, 2021, 63, 140-153.	0.6	15
110	Chicken genome: New tools and concepts. Developmental Dynamics, 2005, 232, 883-886.	0.8	14
111	Optogenetic modeling of human neuromuscular circuits in Duchenne muscular dystrophy with CRISPR and pharmacological corrections. Science Advances, 2021, 7, eabi8787.	4.7	14
112	Rectified random cell motility as a mechanism for embryo elongation. Development (Cambridge), 2022, 149, .	1.2	14
113	A brief history of the segmentation clock. Developmental Biology, 2022, 485, 24-36.	0.9	14
114	Expression of DM-GRASP/BEN in the developing mouse spinal cord and various epithelia. Mechanisms of Development, 2000, 95, 221-224.	1.7	13
115	Welcome to Syndetome. Developmental Cell, 2003, 4, 611-612.	3.1	13
116	Looking inwards: opening a window onto human development. Development (Cambridge), 2015, 142, 1-2.	1.2	13
117	Identification in the Chicken of GRL1 and GRL2: Two Granule Proteins Expressed on the Surface of Activated Leukocytes. Experimental Cell Research, 1993, 204, 156-166.	1.2	11
118	Human muscle production in vitro from pluripotent stem cells: Basic and clinical applications. Seminars in Cell and Developmental Biology, 2021, 119, 39-48.	2.3	9
119	Future developments: your thoughts and our plans. Development (Cambridge), 2016, 143, 1-2.	1.2	8
120	The times they are a-changinâ€™. Development (Cambridge), 2017, 144, 1-2.	1.2	7
121	Chapter 1 Cell migrations and establishment of neuronal connections in the developing brain: a study using the quail-chick chimera system. Progress in Brain Research, 1994, 100, 3-18.	0.9	6
122	Metabolic decisions in development and diseaseâ€"a Keystone Symposia report. Annals of the New York Academy of Sciences, 2021, 1506, 55-73.	1.8	6
123	Making the Clock Tick: Right Time, Right Pace. Developmental Cell, 2013, 24, 115-116.	3.1	5
124	Vertebrate Segmentation: Lunatic Transcriptional Regulation. Current Biology, 2002, 12, R699-R701.	1.8	4
125	More Than Patterningâ€"Hox Genes and the Control of Posterior Axial Elongation. Developmental Cell, 2009, 17, 439-440.	3.1	4
126	BEN/DM-GRASP/SC1 expression during mouse facial development: differential expression and regulation in molars and incisors. Gene Expression Patterns, 2003, 3, 255-259.	0.3	3

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127	Reprogramming development. Development (Cambridge), 2013, 140, 1-2.	1.2	3
128	Stem cells and regeneration: a special issue. Development (Cambridge), 2013, 140, 2445-2445.	1.2	3
129	Developing peer review. Development (Cambridge), 2015, 142, 1389-1389.	1.2	3
130	Introducing cross-referee commenting in peer review. Development (Cambridge), 2016, 143, 3035-3036.	1.2	3
131	Ce n'est qu'un au revoir. Development (Cambridge), 2018, 145, .	1.2	3
132	The Node: a place to discuss, debate and deliberate developmental biology. Development (Cambridge), 2010, 137, 2251-2251.	1.2	2
133	Steering a changing course. Development (Cambridge), 2011, 138, 1-2.	1.2	2
134	<i>Development</i>: looking to the future. Development (Cambridge), 2012, 139, 1893-1894.	1.2	2
135	The San Francisco Declaration on Research Assessment. Development (Cambridge), 2013, 140, 2643-2644.	1.2	2
136	Human development: a Special Issue. Development (Cambridge), 2015, 142, 3071-3072.	1.2	2
137	Introducing preLights: preprint highlights, selected by the biological community. Development (Cambridge), 2018, 145, .	1.2	2
138	Advocating developmental biology. Development (Cambridge), 2018, 145, .	1.2	2
139	Developmental Biology: Cell Intercalation One Step beyond. Current Biology, 2008, 18, R119-R121.	1.8	1
140	Ethical development. Development (Cambridge), 2014, 141, 3439-3440.	1.2	1
141	Developing a new look. Development (Cambridge), 2015, 142, 3803-3804.	1.2	1
142	And one last thing. Development (Cambridge), 2018, 145, .	1.2	1
143	Editorial on Segmentation Focus. Developmental Dynamics, 2007, 236, 1377-1378.	0.8	0
144	Pattern formation and developmental mechanisms. Current Opinion in Genetics and Development, 2008, 18, 285-286.	1.5	0

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145	Developing with the community. Development (Cambridge), 2014, 141, 3-4.	1.2	0
146	Managing patterns and proportions over time. Science, 2014, 345, 1565-1566.	6.0	0
147	Standing Up for Sticklebacks. Cell, 2016, 164, 9-10.	13.5	0
148	Going format-free. Development (Cambridge), 2017, 144, 1919-1919.	1.2	0
149	Human development: recent progress and future prospects. Development (Cambridge), 2018, 145, .	1.2	0
150	Editorial changes. Development (Cambridge), 2017, , .	1.2	0