

Olivier Pourquie

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130
papers

11,221
citations

56
h-index

105
g-index

188
ext. papers

13,058
ext. citations

13.6
avg, IF

6.7
L-index

#	Paper	IF	Citations
130	Avian hairy gene expression identifies a molecular clock linked to vertebrate segmentation and somitogenesis. <i>Cell</i> , 1997 , 91, 639-48	56.2	737
129	FGF signaling controls somite boundary position and regulates segmentation clock control of spatiotemporal Hox gene activation. <i>Cell</i> , 2001 , 106, 219-32	56.2	541
128	The segmentation clock: converting embryonic time into spatial pattern. <i>Science</i> , 2003 , 301, 328-30	33.3	426
127	Maintenance of neuroepithelial progenitor cells by Delta-Notch signalling in the embryonic chick retina. <i>Current Biology</i> , 1997 , 7, 661-70	6.3	372
126	Lateral and axial signals involved in avian somite patterning: a role for BMP4. <i>Cell</i> , 1996 , 84, 461-71	56.2	363
125	A complex oscillating network of signaling genes underlies the mouse segmentation clock. <i>Science</i> , 2006 , 314, 1595-8	33.3	359
124	fgf8 mRNA decay establishes a gradient that couples axial elongation to patterning in the vertebrate embryo. <i>Nature</i> , 2004 , 427, 419-22	50.4	323
123	Making muscle: skeletal myogenesis and. <i>Development (Cambridge)</i> , 2017 , 144, 2104-2122	6.6	308
122	Control of segment number in vertebrate embryos. <i>Nature</i> , 2008 , 454, 335-9	50.4	295
121	Segmental patterning of the vertebrate embryonic axis. <i>Nature Reviews Genetics</i> , 2008 , 9, 370-82	30.1	287
120	Vertebrate segmentation: from cyclic gene networks to scoliosis. <i>Cell</i> , 2011 , 145, 650-63	56.2	254
119	Differentiation of pluripotent stem cells to muscle fiber to model Duchenne muscular dystrophy. <i>Nature Biotechnology</i> , 2015 , 33, 962-9	44.5	247
118	The lunatic fringe gene is a target of the molecular clock linked to somite segmentation in avian embryos. <i>Current Biology</i> , 1998 , 8, 979-82	6.3	233
117	A beta-catenin gradient links the clock and wavefront systems in mouse embryo segmentation. <i>Nature Cell Biology</i> , 2008 , 10, 186-93	23.4	231
116	Signalling dynamics in vertebrate segmentation. <i>Nature Reviews Molecular Cell Biology</i> , 2014 , 15, 709-2148.7	22.1	221
115	A random cell motility gradient downstream of FGF controls elongation of an amniote embryo. <i>Nature</i> , 2010 , 466, 248-52	50.4	216
114	Retinoic acid coordinates somitogenesis and left-right patterning in vertebrate embryos. <i>Nature</i> , 2005 , 435, 215-20	50.4	213

113	Vertebrate somitogenesis. <i>Annual Review of Cell and Developmental Biology</i> , 2001 , 17, 311-50	12.6	212
112	Collinear activation of Hoxb genes during gastrulation is linked to mesoderm cell ingression. <i>Nature</i> , 2006 , 442, 568-71	50.4	174
111	New protease inhibitors prevent gamma-secretase-mediated production of Abeta40/42 without affecting Notch cleavage. <i>Nature Cell Biology</i> , 2001 , 3, 507-11	23.4	169
110	Signaling gradients during paraxial mesoderm development. <i>Cold Spring Harbor Perspectives in Biology</i> , 2010 , 2, a000869	10.2	162
109	Coupling segmentation to axis formation. <i>Development (Cambridge)</i> , 2004 , 131, 5783-93	6.6	161
108	Control of the segmentation process by graded MAPK/ERK activation in the chick embryo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 11343-8	11.5	146
107	Modeling the segmentation clock as a network of coupled oscillations in the Notch, Wnt and FGF signaling pathways. <i>Journal of Theoretical Biology</i> , 2008 , 252, 574-85	2.3	142
106	FGF signaling acts upstream of the NOTCH and WNT signaling pathways to control segmentation clock oscillations in mouse somitogenesis. <i>Development (Cambridge)</i> , 2007 , 134, 4033-41	6.6	137
105	Oscillating expression of c-Hey2 in the presomitic mesoderm suggests that the segmentation clock may use combinatorial signaling through multiple interacting bHLH factors. <i>Developmental Biology</i> , 2000 , 227, 91-103	3.1	133
104	Generation of human muscle fibers and satellite-like cells from human pluripotent stem cells in vitro. <i>Nature Protocols</i> , 2016 , 11, 1833-50	18.8	132
103	Evolutionary plasticity of segmentation clock networks. <i>Development (Cambridge)</i> , 2011 , 138, 2783-92	6.6	127
102	Induction of oligodendrocyte progenitors in the trunk neural tube by ventralizing signals: effects of notochord and floor plate grafts, and of sonic hedgehog. <i>Mechanisms of Development</i> , 1996 , 60, 13-32	1.7	126
101	Changes in Hox genes structure and function during the evolution of the squamate body plan. <i>Nature</i> , 2010 , 464, 99-103	50.4	122
100	Abnormal vertebral segmentation and the notch signaling pathway in man. <i>Developmental Dynamics</i> , 2007 , 236, 1456-74	2.9	116
99	Oscillations of the snail genes in the presomitic mesoderm coordinate segmental patterning and morphogenesis in vertebrate somitogenesis. <i>Developmental Cell</i> , 2006 , 10, 355-66	10.2	116
98	Sharp developmental thresholds defined through bistability by antagonistic gradients of retinoic acid and FGF signaling. <i>Developmental Dynamics</i> , 2007 , 236, 1495-508	2.9	105
97	Hox genes in time and space during vertebrate body formation. <i>Development Growth and Differentiation</i> , 2007 , 49, 265-75	3	96
96	Formation and segmentation of the vertebrate body axis. <i>Annual Review of Cell and Developmental Biology</i> , 2013 , 29, 1-26	12.6	94

95	A nomenclature for prospective somites and phases of cyclic gene expression in the presomitic mesoderm. <i>Developmental Cell</i> , 2001 , 1, 619-20	10.2	94
94	Oscillating signaling pathways during embryonic development. <i>Current Opinion in Cell Biology</i> , 2008 , 20, 632-7	9	90
93	A Gradient of Glycolytic Activity Coordinates FGF and Wnt Signaling during Elongation of the Body Axis in Amniote Embryos. <i>Developmental Cell</i> , 2017 , 40, 342-353.e10	10.2	87
92	Axon fasciculation defects and retinal dysplasias in mice lacking the immunoglobulin superfamily adhesion molecule BEN/ALCAM/SC1. <i>Molecular and Cellular Neurosciences</i> , 2004 , 27, 59-69	4.8	87
91	Rere controls retinoic acid signalling and somite bilateral symmetry. <i>Nature</i> , 2010 , 463, 953-7	50.4	84
90	Incomplete penetrance and phenotypic variability characterize Gdf6-attributable oculo-skeletal phenotypes. <i>Human Molecular Genetics</i> , 2009 , 18, 1110-21	5.6	81
89	BEN as a presumptive target recognition molecule during the development of the olivocerebellar system. <i>Journal of Neuroscience</i> , 1996 , 16, 3296-310	6.6	81
88	A clock-work somite. <i>BioEssays</i> , 2000 , 22, 72-83	4.1	77
87	Hox genes control vertebrate body elongation by collinear Wnt repression. <i>ELife</i> , 2015 , 4,	8.9	77
86	Uncoupling segmentation and somitogenesis in the chick presomitic mesoderm. <i>Genesis</i> , 1998 , 23, 77-85		76
85	Excitable Dynamics and Yap-Dependent Mechanical Cues Drive the Segmentation Clock. <i>Cell</i> , 2017 , 171, 668-682.e11	56.2	75
84	Synchronised cycling gene oscillations in presomitic mesoderm cells require cell-cell contact. <i>International Journal of Developmental Biology</i> , 2005 , 49, 309-15	1.9	70
83	Developmental control of segment numbers in vertebrates. <i>Journal of Experimental Zoology Part B: Molecular and Developmental Evolution</i> , 2009 , 312, 533-44	1.8	67
82	Establishment of Hox vertebral identities in the embryonic spine precursors. <i>Current Topics in Developmental Biology</i> , 2009 , 88, 201-34	5.3	67
81	Mutations in the MESP2 gene cause spondylothoracic dysostosis/Jarcho-Levin syndrome. <i>American Journal of Human Genetics</i> , 2008 , 82, 1334-41	11	64
80	In vitro characterization of the human segmentation clock. <i>Nature</i> , 2020 , 580, 113-118	50.4	63
79	Notch around the clock. <i>Current Opinion in Genetics and Development</i> , 1999 , 9, 559-65	4.9	62
78	The chick embryo: a leading model in somitogenesis studies. <i>Mechanisms of Development</i> , 2004 , 121, 1069-79	1.7	61

77	Somitogenesis: segmenting a vertebrate. <i>Current Opinion in Genetics and Development</i> , 1998 , 8, 487-93	4.9	59
76	Dual mode of paraxial mesoderm formation during chick gastrulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 2744-9	11.5	57
75	SarcTrack. <i>Circulation Research</i> , 2019 , 124, 1172-1183	15.7	56
74	Somite formation and patterning. <i>International Review of Cytology</i> , 2000 , 198, 1-65		56
73	A molecular clock involved in somite segmentation. <i>Current Topics in Developmental Biology</i> , 2001 , 51, 221-48	5.3	55
72	A relative shift in cloacal location repositions external genitalia in amniote evolution. <i>Nature</i> , 2014 , 516, 391-4	50.4	54
71	Sex-dimorphic gene expression and ineffective dosage compensation of Z-linked genes in gastrulating chicken embryos. <i>BMC Genomics</i> , 2010 , 11, 13	4.5	54
70	Expression of genes (CAPN3, SGCA, SGCB, and TTN) involved in progressive muscular dystrophies during early human development. <i>Genomics</i> , 1998 , 48, 145-56	4.3	52
69	The vertebrate segmentation clock: the tip of the iceberg. <i>Current Opinion in Genetics and Development</i> , 2008 , 18, 317-23	4.9	51
68	Printing of Adhesive Hydrogel Scaffolds for the Treatment of Skeletal Muscle Injuries.. <i>ACS Applied Bio Materials</i> , 2020 , 3, 1568-1579	4.1	50
67	Progress in the understanding of the genetic etiology of vertebral segmentation disorders in humans. <i>Annals of the New York Academy of Sciences</i> , 2009 , 1151, 38-67	6.5	49
66	Vertebrate somitogenesis: a novel paradigm for animal segmentation?. <i>International Journal of Developmental Biology</i> , 2003 , 47, 597-603	1.9	49
65	From head to tail: links between the segmentation clock and antero-posterior patterning of the embryo. <i>Current Opinion in Genetics and Development</i> , 2002 , 12, 519-23	4.9	48
64	Lighting up developmental mechanisms: how fluorescence imaging heralded a new era. <i>Development (Cambridge)</i> , 2010 , 137, 373-87	6.6	42
63	Synthesis of new 3-alkoxy-7-amino-4-chloro-isocoumarin derivatives as new beta-amyloid peptide production inhibitors and their activities on various classes of protease. <i>Bioorganic and Medicinal Chemistry</i> , 2003 , 11, 3141-52	3.4	42
62	Genetics. Chicken genome--science nuggets to come soon. <i>Science</i> , 2003 , 300, 1669	33.3	42
61	Independent regulation of vertebral number and vertebral identity by microRNA-196 paralogs. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E4884-93	11.5	40
60	The vertebrate segmentation clock. <i>Journal of Anatomy</i> , 2001 , 199, 169-75	2.9	40

59	Intracellular pH controls WNT downstream of glycolysis in amniote embryos. <i>Nature</i> , 2020 , 584, 98-101	50.4	39
58	Segmentation of the paraxial mesoderm and vertebrate somitogenesis. <i>Current Topics in Developmental Biology</i> , 2000 , 47, 81-105	5.3	35
57	Multi-scale quantification of tissue behavior during amniote embryo axis elongation. <i>Development (Cambridge)</i> , 2017 , 144, 4462-4472	6.6	32
56	Comparison of pattern detection methods in microarray time series of the segmentation clock. <i>PLoS ONE</i> , 2008 , 3, e2856	3.7	32
55	Recapitulating early development of mouse musculoskeletal precursors of the paraxial mesoderm. <i>Development (Cambridge)</i> , 2018 , 145,	6.6	31
54	Spatiotemporal compartmentalization of key physiological processes during muscle precursor differentiation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 4224-9	11.5	30
53	In vivo analysis of mRNA stability using the Tet-Off system in the chicken embryo. <i>Developmental Biology</i> , 2005 , 284, 292-300	3.1	30
52	Timed Collinear Activation of Hox Genes during Gastrulation Controls the Avian Forelimb Position. <i>Current Biology</i> , 2019 , 29, 35-50.e4	6.3	29
51	On periodicity and directionality of somitogenesis. <i>Anatomy and Embryology</i> , 2006 , 211 Suppl 1, 3-8		28
50	BEN, a novel surface molecule of the immunoglobulin superfamily on avian hemopoietic progenitor cells shared with neural cells. <i>Experimental Cell Research</i> , 1992 , 203, 91-9	4.2	27
49	Clocks regulating developmental processes. <i>Current Opinion in Neurobiology</i> , 1998 , 8, 665-70	7.6	25
48	An antigen expressed by avian neuronal cells is also expressed by activated T lymphocytes. <i>Cellular Immunology</i> , 1992 , 141, 99-110	4.4	25
47	Skin development: delta laid bare. <i>Current Biology</i> , 2000 , 10, R425-8	6.3	24
46	The Lin28/let-7 Pathway Regulates the Mammalian Caudal Body Axis Elongation Program. <i>Developmental Cell</i> , 2019 , 48, 396-405.e3	10.2	23
45	Segmentation clock: insights from computational models. <i>Current Biology</i> , 2003 , 13, R632-4	6.3	23
44	Mechanical Coupling Coordinates the Co-elongation of Axial and Paraxial Tissues in Avian Embryos. <i>Developmental Cell</i> , 2020 , 55, 354-366.e5	10.2	22
43	Bioelectrical domain walls in homogeneous tissues. <i>Nature Physics</i> , 2020 , 16, 357-364	16.2	22
42	couples the segmentation clock to somite morphogenesis by regulating N-cadherin-dependent adhesion. <i>Development (Cambridge)</i> , 2017 , 144, 664-676	6.6	20

41	Mechanics of Anteroposterior Axis Formation in Vertebrates. <i>Annual Review of Cell and Developmental Biology</i> , 2019 , 35, 259-283	12.6	19
40	Manipulation and electroporation of the avian segmental plate and somites in vitro. <i>Methods in Cell Biology</i> , 2008 , 87, 257-70	1.8	19
39	The WHHERE coactivator complex is required for retinoic acid-dependent regulation of embryonic symmetry. <i>Nature Communications</i> , 2017 , 8, 728	17.4	17
38	Manteia, a predictive data mining system for vertebrate genes and its applications to human genetic diseases. <i>Nucleic Acids Research</i> , 2014 , 42, D882-91	20.1	17
37	Retinoic acid. <i>Current Biology</i> , 2008 , 18, R191-2	6.3	17
36	Cyclic Nrarp mRNA expression is regulated by the somitic oscillator but Nrarp protein levels do not oscillate. <i>Developmental Dynamics</i> , 2009 , 238, 3043-3055	2.9	15
35	Vertebrate segmentation: is cycling the rule?. <i>Current Opinion in Cell Biology</i> , 2000 , 12, 747-51	9	15
34	The Long Road to Making Muscle In Vitro. <i>Current Topics in Developmental Biology</i> , 2018 , 129, 123-142	5.3	15
33	Differentiation of the human PAX7-positive myogenic precursors/satellite cell lineage. <i>Development (Cambridge)</i> , 2020 , 147,	6.6	14
32	Somite formation in the chicken embryo. <i>International Journal of Developmental Biology</i> , 2018 , 62, 57-62	1.9	13
31	Exploring the Influence of Cell Metabolism on Cell Fate through Protein Post-translational Modifications. <i>Developmental Cell</i> , 2020 , 54, 282-292	10.2	12
30	Welcome to syndetome: a new somitic compartment. <i>Developmental Cell</i> , 2003 , 4, 611-2	10.2	11
29	Chicken genome: new tools and concepts. <i>Developmental Dynamics</i> , 2005 , 232, 883-6	2.9	11
28	Integrative data mining highlights candidate genes for monogenic myopathies. <i>PLoS ONE</i> , 2014 , 9, e110888	10	10
27	Expression of DM-GRASP/BEN in the developing mouse spinal cord and various epithelia. <i>Mechanisms of Development</i> , 2000 , 95, 221-4	1.7	10
26	Identification in the chicken of GRL1 and GRL2: two granule proteins expressed on the surface of activated leukocytes. <i>Experimental Cell Research</i> , 1993 , 204, 156-66	4.2	10
25	Prednisolone rescues Duchenne muscular dystrophy phenotypes in human pluripotent stem cell-derived skeletal muscle in vitro. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	8
24	Cell migrations and establishment of neuronal connections in the developing brain: a study using the quail-chick chimera system. <i>Progress in Brain Research</i> , 1994 , 100, 3-18	2.9	6

23	Dynamics of primitive streak regression controls the fate of neuromesodermal progenitors in the chicken embryo. <i>ELife</i> , 2021 , 10,	8.9	6
22	Bioinks and bioprinting strategies for skeletal muscle tissue engineering. <i>Advanced Materials</i> , 2021 , e2105883	10.5	5
21	Patterning with clocks and genetic cascades: Segmentation and regionalization of vertebrate versus insect body plans. <i>PLoS Genetics</i> , 2021 , 17, e1009812	6	5
20	Dynamics of primitive streak regression controls the fate of neuro-mesodermal progenitors in the chicken embryo		5
19	In vitro systems: A new window to the segmentation clock. <i>Development Growth and Differentiation</i> , 2021 , 63, 140-153	3	5
18	Making the clock tick: right time, right pace. <i>Developmental Cell</i> , 2013 , 24, 115-6	10.2	4
17	More than patterning--Hox genes and the control of posterior axial elongation. <i>Developmental Cell</i> , 2009 , 17, 439-40	10.2	4
16	Paraxial mesoderm organoids model development of human somites.. <i>ELife</i> , 2022 , 11,	8.9	4
15	Author response: Hox genes control vertebrate body elongation by collinear Wnt repression 2015 ,		4
14	Motility-gradient induced elongation of the vertebrate embryo		4
13	BEN/DM-GRASP/SC1 expression during mouse facial development: differential expression and regulation in molars and incisors. <i>Gene Expression Patterns</i> , 2003 , 3, 255-9	1.5	3
12	Human muscle production in vitro from pluripotent stem cells: Basic and clinical applications. <i>Seminars in Cell and Developmental Biology</i> , 2021 , 119, 39-48	7.5	3
11	Vertebrate segmentation: lunatic transcriptional regulation. <i>Current Biology</i> , 2002 , 12, R699-701	6.3	2
10	In vitro characterization of the human segmentation clock		2
9	Prednisolone rescues Duchenne Muscular Dystrophy phenotypes in human pluripotent stem cells-derived skeletal muscle in vitro		2
8	Mechanical Coupling Coordinates the Co-elongation of Axial and Paraxial Tissues in Avian Embryos		2
7	Optogenetic modeling of human neuromuscular circuits in Duchenne muscular dystrophy with CRISPR and pharmacological corrections. <i>Science Advances</i> , 2021 , 7, eabi8787	14.3	2
6	hiPSC-derived 3D Bioprinted Skeletal Muscle Tissue Implants Regenerate Skeletal Muscle Following Volumetric Muscle Loss		2

5	Developmental biology: cell intercalation one step beyond. <i>Current Biology</i> , 2008 , 18, R119-21	6.3	1
4	Metabolic decisions in development and disease-a Keystone Symposia report. <i>Annals of the New York Academy of Sciences</i> , 2021 ,	6.5	1
3	A brief history of the segmentation clock.. <i>Developmental Biology</i> , 2022 , 485, 24-24	3.1	1
2	Standing Up for Sticklebacks. <i>Cell</i> , 2016 , 164, 9-10	56.2	
1	Developmental Biology. Managing patterns and proportions over time. <i>Science</i> , 2014 , 345, 1565-6	33.3	