Alfonso Martinez Arias

List of Publications by Year
in descending order

90 papers	7,552 citations	61984 43 h-index	62596 80 g-index
166 all docs	166 docs citations	166 times ranked	7714 citing authors

#	Article	IF	Citations
1	Regulated Fluctuations in Nanog Expression Mediate Cell Fate Decisions in Embryonic Stem Cells. PLoS Biology, 2009, 7, e1000149.	5.6	498
2	Multi-axial self-organization properties of mouse embryonic stem cells into gastruloids. Nature, 2018, 562, 272-276.	27.8	347
3	Symmetry breaking, germ layer specification and axial organisation in aggregates of mouse embryonic stem cells. Development (Cambridge), 2014, 141, 4231-4242.	2.5	346
4	Transition states and cell fate decisions in epigenetic landscapes. Nature Reviews Genetics, 2016, 17, 693-703.	16.3	342
5	Cell and molecular biology of Notch. Journal of Endocrinology, 2007, 194, 459-474.	2.6	312
6	An in vitro model of early anteroposterior organization during human development. Nature, 2020, 582, 410-415.	27.8	310
7	The hope and the hype of organoid research. Development (Cambridge), 2017, 144, 938-941.	2.5	303
8	Single-cell and spatial transcriptomics reveal somitogenesis in gastruloids. Nature, 2020, 582, 405-409.	27.8	274
9	Filtering transcriptional noise during development: concepts and mechanisms. Nature Reviews Genetics, 2006, 7, 34-44.	16.3	247
10	Secretion and movement of wingless protein in the epidermis of the Drosophila embryo. Mechanisms of Development, 1991, 35, 43-54.	1.7	238
11	A draft map of the mouse pluripotent stem cell spatial proteome. Nature Communications, 2016, 7, 8992.	12.8	197
12	CSL-independent Notch signalling: a checkpoint in cell fate decisions during development?. Current Opinion in Genetics and Development, 2002, 12, 524-533.	3.3	194
13	Epithelial Mesenchymal Interactions in Cancer and Development. Cell, 2001, 105, 425-431.	28.9	186
14	Notch, a Universal Arbiter of Cell Fate Decisions. Science, 2006, 314, 1414-1415.	12.6	168
15	Anteroposterior polarity and elongation in the absence of extraembryonic tissues and spatially localised signalling in <i>Gastruloids</i>, mammalian embryonic organoids. Development (Cambridge), 2017, 144, 3894-3906.	2.5	166
16	Wnt/Î^{2}-catenin and FGF signalling direct the specification and maintenance of a neuromesodermal axial progenitor in ensembles of mouse embryonic stem cells. Development (Cambridge), 2014, 141, 4243-4253.	2.5	141
17	An Intrinsic Dominant Negative Activity of Serrate That Is Modulated during Wing Development inDrosophila. Developmental Biology, 1997, 189, 123-134.	2.0	119
18	Different Spatial and Temporal Interactions betweenNotch, wingless,andvestigialSpecify Proximal and Distal Pattern Elements of the Wing inDrosophila. Developmental Biology, 1998, 194, 196-212.	2.0	119

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19	Wnt signalling: a theme with nuclear variations. BioEssays, 2001, 23, 311-318.	2.5	119
20	A membrane-associated Î²-catenin/Oct4 complex correlates with ground-state pluripotency in mouse embryonic stem cells. Development (Cambridge), 2013, 140, 1171-1183.	2.5	113
21	Planar polarity and actin dynamics in the epidermis of Drosophila. Nature Cell Biology, 2002, 4, 937-944.	10.3	109
22	Wnt signalling: pathway or network?. Current Opinion in Genetics and Development, 1999, 9, 447-454.	3.3	103
23	FGF/MAPK signaling sets the switching threshold of a bistable circuit controlling cell fate decisions in ES cells. Development (Cambridge), 2015, 142, 4205-16.	2.5	100
24	Organoids and the genetically encoded selfâ€•assembly of embryonic stem cells. BioEssays, 2016, 38, 181-191.	2.5	99
25	Gene expression heterogeneities in embryonic stem cell populations: origin and function. Current Opinion in Cell Biology, 2011, 23, 650-656.	5.4	96
26	A Functional Analysis of <i>Notch</i> Mutations in Drosophila. Genetics, 1997, 147, 177-188.	2.9	86
27	Dpp signalling orchestrates dorsal closure by regulating cell shape changes both in the amnioserosa and in the epidermis. Mechanisms of Development, 2007, 124, 884-897.	1.7	82
28	Cell dynamics and gene expression control in tissue homeostasis and development. Molecular Systems Biology, 2015, 11, 792.	7.2	75
29	Brachyury cooperates with Wnt/Î²-catenin signalling to elicit primitive-streak-like behaviour in differentiating mouse embryonic stem cells. BMC Biology, 2014, 12, 63.	3.8	74
30	On the nature and function of organizers. Development (Cambridge), 2018, 145, .	2.5	73
31	Debate ethics of embryo models from stem cells. Nature, 2018, 564, 183-185.	27.8	72
32	Mapping Organelle Proteins and Protein Complexes in <i>Drosophila melanogaster</i>. Journal of Proteome Research, 2009, 8, 2667-2678.	3.7	71
33	Requirements for adherens junction components in the interaction between epithelial tissues during dorsal closure in<i>Drosophila</i>. Journal of Cell Science, 2007, 120, 3289-3298.	2.0	70
34	Towards a statistical mechanics of cell fate decisions. Current Opinion in Genetics and Development, 2012, 22, 619-626.	3.3	69
35	Evo-engineering and the cellular and molecular origins of the vertebrate spinal cord. Developmental Biology, 2017, 432, 3-13.	2.0	66
36	The Abruptex Mutations of Notch Disrupt the Establishment of Proneural Clusters in Drosophila. Developmental Biology, 1999, 216, 230-242.	2.0	63

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37	Wnts as morphogens? The view from the wing of Drosophila. Nature Reviews Molecular Cell Biology, 2003, 4, 321-325.	37.0	56
38	An interplay between extracellular signalling and the dynamics of the exit from pluripotency drives cell fate decisions in mouse ES cells. Biology Open, 2014, 3, 614-626.	1.2	55
39	Repression by Notch is required before Wingless signalling during muscle progenitor cell development in Drosophila. Current Biology, 1999, 9, 707-S1.	3.9	54
40	Ligand-Independent Traffic of Notch Buffers Activated Armadillo in Drosophila. PLoS Biology, 2009, 7, e1000169.	5.6	52
41	Generation of Aggregates of Mouse Embryonic Stem Cells that Show Symmetry Breaking, Polarization and Emergent Collective Behaviour In Vitro. Journal of Visualized Experiments, 2015, , .	0.3	51
42	A Role of Receptor Notch in Ligand cis-Inhibition in Drosophila. Current Biology, 2010, 20, 554-560.	3.9	50
43	Correlations Between the Levels of Oct4 and Nanog as a Signature for NaÃ¯ve Pluripotency in Mouse Embryonic Stem Cells. Stem Cells, 2012, 30, 2683-2691.	3.2	48
44	A molecular basis for developmental plasticity in early mammalian embryos. Development (Cambridge), 2013, 140, 3499-3510.	2.5	48
45	Drosophila melanogaster and the Development of Biology in the 20th Century. Methods in Molecular Biology, 2008, 420, 1-25.	0.9	47
46	Endocytic and Recycling Endosomes Modulate Cell Shape Changes and Tissue Behaviour during Morphogenesis in Drosophila. PLoS ONE, 2011, 6, e18729.	2.5	46
47	A Sprouty4 reporter to monitor FGF/ERK signaling activity in ESCs and mice. Developmental Biology, 2018, 441, 104-126.	2.0	45
48	Wingless Modulates the Effects of Dominant Negative Notch Molecules in the Developing Wing of Drosophila. Developmental Biology, 1999, 216, 210-229.	2.0	44
49	Pluripotent stem cell models of early mammalian development. Current Opinion in Cell Biology, 2020, 66, 89-96.	5.4	44
50	A cellular basis for pattern formation in the insect epidermis. Trends in Genetics, 1989, 5, 262-267.	6.7	41
51	Notch signaling targets the Wingless responsiveness of a Ubx visceral mesoderm enhancer in Drosophila. Current Biology, 2001, 11, 375-385.	3.9	41
52	A competitive protein interaction network buffers Oct4â€mediated differentiation to promote pluripotency in embryonic stem cells. Molecular Systems Biology, 2013, 9, 694.	7.2	41
53	Wntâ€Notch signalling: An integrated mechanism regulating transitions between cell states. BioEssays, 2012, 34, 110-118.	2.5	40
54	Axis Specification in Zebrafish Is Robust to Cell Mixing and Reveals a Regulation of Pattern Formation by Morphogenesis. Current Biology, 2020, 30, 2984-2994.e3.	3.9	40

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55	Contractile and Mechanical Properties of Epithelia with Perturbed Actomyosin Dynamics. PLoS ONE, 2014, 9, e95695.	2.5	38
56	Bioengineered embryoids mimic post-implantation development in vitro. Nature Communications, 2021, 12, 5140.	12.8	35
57	In vitro teratogenicity testing using a 3D, embryo-like gastruloid system. Reproductive Toxicology, 2021, 105, 72-90.	2.9	35
58	The structure of Wntch signalling and the resolution of transition states in development. Seminars in Cell and Developmental Biology, 2012, 23, 443-449.	5.0	33
59	Human gastrulation: The embryo and its models. Developmental Biology, 2021, 474, 100-108.	2.0	33
60	Notch synergizes with axin to regulate the activity of armadillo in Drosophila. Developmental Dynamics, 2006, 235, 2656-2666.	1.8	32
61	Inhibition of Î²-cateninâ€"TCF1 interaction delays differentiation of mouse embryonic stem cells. Journal of Cell Biology, 2015, 211, 39-51.	5.2	32
62	Wnt/ÃŸ-catenin signalling and the dynamics of fate decisions in early mouse embryos and embryonic stem (ES) cells. Seminars in Cell and Developmental Biology, 2015, 47-48, 101-109.	5.0	32
63	Cell-state transitions and collective cell movement generate an endoderm-like region in gastruloids. ELife, 2022, 11, .	6.0	32
64	Single cell lineage analysis of mouse embryonic stem cells at the exit from pluripotency. Biology Open, 2013, 2, 1049-1056.	1.2	29
65	NeuroMesodermal Progenitors (NMPs): a comparative study between Pluripotent Stem Cells and Embryo derived populations. Development (Cambridge), 2019, 146, .	2.5	29
66	An Epiblast Stem Cell derived multipotent progenitor population for axial extension. Development (Cambridge), 2019, 146, .	2.5	27
67	Wingless modulates the ligand independent traffic of Notch through Dishevelled. Fly, 2010, 4, 182-193.	1.7	24
68	Experimental embryology of gastrulation: pluripotent stem cells as a new model system. Current Opinion in Genetics and Development, 2020, 64, 78-83.	3.3	23
69	New alleles of Notch draw a blueprint for multifunctionality. Trends in Genetics, 2002, 18, 168-170.	6.7	21
70	Establishment of the vertebrate body plan: Rethinking gastrulation through stem cell models of early embryogenesis. Developmental Cell, 2021, 56, 2405-2418.	7.0	21
71	The primitive streak and cellular principles of building an amniote body through gastrulation. Science, 2021, 374, abg1727.	12.6	20
72	Gastruloids: Pluripotent stem cell models of mammalian gastrulation and embryo engineering. Developmental Biology, 2022, 488, 35-46.	2.0	20

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73	Generating Gastruloids from Mouse Embryonic Stem Cells. Protocol Exchange, 0, , .	0.3	17
74	Interactions between the amnioserosa and the epidermis revealed by the function of the <i>u-shaped</i> gene. Biology Open, 2012, 1, 353-361.	1.2	15
75	Origin and function of fluctuations in cell behaviour and the emergence of patterns. Seminars in Cell and Developmental Biology, 2009, 20, 877-884.	5.0	13
76	Biomedical and societal impacts of inÂvitro embryo models of mammalian development. Stem Cell Reports, 2021, 16, 1021-1030.	4.8	13
77	Patterned Cell Adhesion Associated with Tissue Deformations during Dorsal Closure in Drosophila. PLoS ONE, 2011, 6, e27159.	2.5	11
78	Single-Cell Approaches: Pandoraâ€™s Box of Developmental Mechanisms. Developmental Cell, 2016, 38, 574-578.	7.0	10
79	High-throughput localization of organelle proteins by mass spectrometry: a quantum leap for cell biology. BioEssays, 2006, 28, 780-784.	2.5	7
80	The cell in the age of the genomic revolution: Cell Regulatory Networks. Cells and Development, 2021, 168, 203720.	1.5	7
81	Insects take a homeotic test. Nature, 1994, 372, 408-409.	27.8	5
82	A new dawn for an old connection: development meets the cell. Trends in Cell Biology, 2002, 12, 316-320.	7.9	5
83	Reverse-engineering growth and form in Heidelberg. Development (Cambridge), 2019, 146, .	2.5	5
84	Mammalian body plan engineering: Lessons and challenges. Current Opinion in Systems Biology, 2018, 11, 50-56.	2.6	2
85	CELL SIGNALING: Frizzled at the Cutting Edge of the Synapse. Science, 2005, 310, 1284-1285.	12.6	1
86	Developmental biology. Trends in Genetics, 1989, 5, 31-32.	6.7	0
87	Molecular biology of the cell - The problems book. Trends in Genetics, 1989, 5, 420.	6.7	0
88	Building and engineering organisms: the cellular interface. Mechanisms of Development, 2003, 120, 1213-1215.	1.7	0
89	Theme and variations on biology and civilisation. Development (Cambridge), 2012, 139, 4493-4494.	2.5	0
90	Developmental biology comes of age. Journal of Cell Science, 2002, 115, 2623-2624.	2.0	0