Roberto Mayor

List of Publications by Year
in descending order

132 papers	13,562 citations	22153 59 h-index	24258 110 g-index
149 all docs	149 docs citations	149 times ranked	11270 citing authors

#	Article	IF	Citations
1	Self-organized collective cell behaviors as design principles for synthetic developmental biology. Seminars in Cell and Developmental Biology, 2023, 141, 63-73.	5.0	2
2	Durotaxis: The Hard Path from InÂVitro to InÂVivo. Developmental Cell, 2021, 56, 227-239.	7.0	63
3	20 years of the â€œPractical Course in Developmental Biologyâ€•in Latin America: from Santiago to Quintay, via Juquehy, Buenos Aires and Montevideo. International Journal of Developmental Biology, 2021, 65, 83-91.	0.6	0
4	Moving forward. Cells and Development, 2021, 165, 203654.	1.5	1
5	Mechanosensitive ion channels in cell migration. Cells and Development, 2021, 166, 203683.	1.5	28
6	Reprint of: Mechanosensitive ion channels in cell migration. Cells and Development, 2021, , 203730.	1.5	1
7	Special rebranding issue: â€œQuantitative cell and developmental biologyâ€• Cells and Development, 2021, , 203758.	1.5	0
8	The mechanosensitive channel Piezo1 cooperates with semaphorins to control neural crest migration. Development (Cambridge), 2021, 148, .	2.5	17
9	Collective durotaxis along a self-generated stiffness gradient in vivo. Nature, 2021, 600, 690-694.	27.8	110
10	Editorial â€œMODâ€• Mechanisms of Development, 2020, 161, 103576.	1.7	0
11	All Roads Lead to Directional Cell Migration. Trends in Cell Biology, 2020, 30, 852-868.	7.9	101
12	Rules of collective migration: from the wildebeest to the neural crest. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190387.	4.0	36
13	SPIN90 associates with mDia1 and the Arp2/3 complex to regulate cortical actin organization. Nature Cell Biology, 2020, 22, 803-814.	10.3	48
14	An optochemical tool for light-induced dissociation of adherens junctions to control mechanical coupling between cells. Nature Communications, 2020, 11, 472.	12.8	31
15	Guidelines and definitions for research on epithelialâ€"mesenchymal transition. Nature Reviews Molecular Cell Biology, 2020, 21, 341-352.	37.0	1,195
16	Adjustable viscoelasticity allows for efficient collective cell migration. Seminars in Cell and Developmental Biology, 2019, 93, 55-68.	5.0	87
17	Integrating chemical and mechanical signals in neural crest cell migration. Current Opinion in Genetics and Development, 2019, 57, 16-24.	3.3	51
18	Cell fate decisions during development. Science, 2019, 364, 937-938.	12.6	8

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19	Neural crest streaming as an emergent property of tissue interactions during morphogenesis. PLoS Computational Biology, 2019, 15, e1007002.	3.2	28
20	Supracellular migration â€“ beyond collective cell migration. Journal of Cell Science, 2019, 132, .	2.0	70
21	Collective Cell Migration: Wisdom of the Crowds Transforms a Negative Cue into a Positive One. Current Biology, 2019, 29, R205-R207.	3.9	2
22	In Vivo and In Vitro Quantitative Analysis of Neural Crest Cell Migration. Methods in Molecular Biology, 2019, 1976, 135-152.	0.9	12
23	In vivo topology converts competition for cell-matrix adhesion into directional migration. Nature Communications, 2019, 10, 1518.	12.8	30
24	Tissue stiffening coordinates morphogenesis by triggering collective cell migration in vivo. Nature, 2018, 554, 523-527.	27.8	404
25	Control of neural crest induction by MarvelD3-mediated attenuation of JNK signalling. Scientific Reports, 2018, 8, 1204.	3.3	10
26	Characterization of Pax3 and Sox10 transgenic Xenopus laevis embryos as tools to study neural crest development. Developmental Biology, 2018, 444, S202-S208.	2.0	14
27	Mechanisms of Neural Crest Migration. Annual Review of Genetics, 2018, 52, 43-63.	7.6	135
28	MoD Special issue on â€œDevelopmental Biology in Latin Americaâ€. Mechanisms of Development, 2018, 154, 1.	1.7	0
29	Gap junction protein Connexin-43 is a direct transcriptional regulator of N-cadherin in vivo. Nature Communications, 2018, 9, 3846.	12.8	115
30	The Ric-8A/GÎ±13/FAK signaling cascade controls focal adhesion formation during neural crest cell migration. Development (Cambridge), 2018, 145, .	2.5	13
31	Supracellular contraction at the rear of neural crest cell groups drives collective chemotaxis. Science, 2018, 362, 339-343.	12.6	123
32	Michael Abercrombie: contact inhibition of locomotion and more. International Journal of Developmental Biology, 2018, 62, 5-13.	0.6	19
33	Redistribution of Adhesive Forces through Src/FAK Drives Contact Inhibition of Locomotion in Neural Crest. Developmental Cell, 2018, 45, 565-579.e3.	7.0	33
34	Tuning Collective Cell Migration by Cellâ€"Cell Junction Regulation. Cold Spring Harbor Perspectives in Biology, 2017, 9, a029199.	5.5	268
35	PDGF controls contact inhibition of locomotion by regulating N-cadherin during neural crest migration. Development (Cambridge), 2017, 144, 2456-2468.	2.5	58
36	Mechanisms and in vivo functions of contact inhibition of locomotion. Nature Reviews Molecular Cell Biology, 2017, 18, 43-55.	37.0	141

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37	PDGF controls contact inhibition of locomotion by regulating N-cadherin during neural crest migration. Journal of Cell Science, 2017, 130, e1.2-e1.2.	2.0	1
38	Directional cell movements downstream of Gbx2 and Otx2 control the assembly of sensory placodes. Biology Open, 2016, 5, 1620-1624.	1.2	13
39	MarvelD3 regulates the c-Jun N-terminal kinase pathway during eye development in Xenopus. Biology Open, 2016, 5, 1631-1641.	1.2	7
40	Modelling collective cell migration of neural crest. Current Opinion in Cell Biology, 2016, 42, 22-28.	5.4	36
41	The Molecular Basis of Radial Intercalation during Tissue Spreading in Early Development. Developmental Cell, 2016, 37, 213-225.	7.0	38
42	Delamination of neural crest cells requires transient and reversible Wnt inhibition mediated by DACT1/2. Development (Cambridge), 2016, 143, 2194-205.	2.5	39
43	Editorial overview: Cell dynamics in development, tissue remodelling, and cancer. Current Opinion in Cell Biology, 2016, 42, iv-vi.	5.4	4
44	Control of the collective migration of enteric neural crest cells by the Complement anaphylatoxin C3a and N-cadherin. Developmental Biology, 2016, 414, 85-99.	2.0	22
45	In vivo confinement promotes collective migration of neural crest cells. Journal of Cell Biology, 2016, 213, 543-555.	5.2	117
46	Ca2+/H+ exchange by acidic organelles regulates cell migration in vivo. Journal of Cell Biology, 2016, 212, 803-813.	5.2	91
47	Collective cell migration in development. Journal of Cell Biology, 2016, 212, 143-155.	5.2	356
48	Chemotaxis during neural crest migration. Seminars in Cell and Developmental Biology, 2016, 55, 111-118.	5.0	56
49	The front and rear of collective cell migration. Nature Reviews Molecular Cell Biology, 2016, 17, 97-109.	37.0	649
50	Molecular basis of contact inhibition of locomotion. Cellular and Molecular Life Sciences, 2016, 73, 1119-1130.	5.4	89
51	Collective cell migration in development. Journal of Experimental Medicine, 2016, 213, 2132OIA3.	8.5	1
52	Ca²⁺/H⁺exchange by acidic organelles regulates cell migration in vivo. Journal of Experimental Medicine, 2016, 213, 2134OIA28.	8.5	0
53	Connexins in migration during development and cancer. Developmental Biology, 2015, 401, 143-151.	2.0	50
54	Embryonic Cellâ€“Cell Adhesion. Current Topics in Developmental Biology, 2015, 112, 301-323.	2.2	29

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55	Forcing contact inhibition of locomotion. Trends in Cell Biology, 2015, 25, 373-375.	7.9	20
56	Animal models for studying neural crest development: is the mouse different?. Development (Cambridge), 2015, 142, 1555-1560.	2.5	63
57	Cell traction in collective cell migration and morphogenesis: The chase and run mechanism. Cell Adhesion and Migration, 2015, 9, 380-383.	2.7	18
58	Cadherin Switch during EMT in Neural Crest Cells Leads to Contact Inhibition of Locomotion via Repolarization of Forces. Developmental Cell, 2015, 34, 421-434.	7.0	236
59	Neural Crest Determination and Migration. , 2015, , 315-330.		0
60	Directional Collective Cell Migration Emerges as a Property of Cell Interactions. PLoS ONE, 2014, 9, e104969.	2.5	68
61	Neural Crest Cell Migration. , 2014, , 73-88.		7
62	The role of the non-canonical Wntâ€“planar cell polarity pathway in neural crest migration. Biochemical Journal, 2014, 457, 19-26.	3.7	83
63	In vivo collective cell migration requires an LPAR2-dependent increase in tissue fluidity. Journal of Cell Biology, 2014, 206, 113-127.	5.2	125
64	Neural crest and placode interaction during the development of the cranial sensory system. Developmental Biology, 2014, 389, 28-38.	2.0	113
65	Par3 controls neural crest migration by promoting microtubule catastrophe during contact inhibition of locomotion. Development (Cambridge), 2013, 140, 4763-4775.	2.5	72
66	Lamellipodin and the Scar/WAVE complex cooperate to promote cell migration in vivo. Journal of Cell Biology, 2013, 203, 673-689.	5.2	107
67	Complement in animal development: Unexpected roles of a highly conserved pathway. Seminars in Immunology, 2013, 25, 39-46.	5.6	20
68	Ric-8A, a guanine nucleotide exchange factor for heterotrimeric G proteins, is critical for cranial neural crest cell migration. Developmental Biology, 2013, 378, 74-82.	2.0	15
69	Chase-and-run between adjacent cell populations promotes directional collective migration. Nature Cell Biology, 2013, 15, 763-772.	10.3	260
70	Rediscovering contact inhibition in the embryo. Journal of Microscopy, 2013, 251, 206-211.	1.8	19
71	The neural crest. Development (Cambridge), 2013, 140, 2247-2251.	2.5	264
72	Collective cell migration of epithelial and mesenchymal cells. Cellular and Molecular Life Sciences, 2013, 70, 3481-3492.	5.4	132

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73	A novel method to study contact inhibition of locomotion using micropatterned substrates. Biology Open, 2013, 2, 901-906.	1.2	51
74	The hypoxia factor Hif-1Î± controls neural crest chemotaxis and epithelial to mesenchymal transition. Journal of Cell Biology, 2013, 201, 759-776.	5.2	119
75	Cadherin-11 Mediates Contact Inhibition of Locomotion during Xenopus Neural Crest Cell Migration. PLoS ONE, 2013, 8, e85717.	2.5	60
76	Cadherins in collective cell migration of mesenchymal cells. Current Opinion in Cell Biology, 2012, 24, 677-684.	5.4	153
77	Neural crest migration: interplay between chemorepellents, chemoattractants, contact inhibition, epithelialâ€"mesenchymal transition, and collective cell migration. Wiley Interdisciplinary Reviews: Developmental Biology, 2012, 1, 435-445.	5.9	92
78	Neural crest delamination and migration: From epithelium-to-mesenchyme transition to collective cell migration. Developmental Biology, 2012, 366, 34-54.	2.0	439
79	Early neural crest induction requires an initial inhibition of Wnt signals. Developmental Biology, 2012, 365, 196-207.	2.0	39
80	Mutual repression between Gbx2 and Otx2 in sensory placodes reveals a general mechanism for ectodermal patterning. Developmental Biology, 2012, 367, 55-65.	2.0	66
81	Can mesenchymal cells undergo collective cell migration? The case of the neural crest. Cell Adhesion and Migration, 2011, 5, 490-498.	2.7	58
82	Complement Fragment C3a Controls Mutual Cell Attraction during Collective Cell Migration. Developmental Cell, 2011, 21, 1026-1037.	7.0	271
83	Collective cell migration of the cephalic neural crest: The art of integrating information. Genesis, 2011, 49, 164-176.	1.6	74
84	Beads on the Run: Beads as Alternative Tools for Chemotaxis Assays. Methods in Molecular Biology, 2011, 769, 449-460.	0.9	16
85	Keeping in touch with contact inhibition of locomotion. Trends in Cell Biology, 2010, 20, 319-328.	7.9	259
86	Integrating chemotaxis and contact-inhibition during collective cell migration. Small GTPases, 2010, 1, 113-117.	1.6	51
87	Collective Chemotaxis Requires Contact-Dependent Cell Polarity. Developmental Cell, 2010, 19, 39-53.	7.0	465
88	The posteriorizing gene<i>Gbx2</i>is a direct target of Wnt signalling and the earliest factor in neural crest induction. Development (Cambridge), 2009, 136, 3267-3278.	2.5	132
89	Differential requirements of BMP and Wnt signalling during gastrulation and neurulation define two steps in neural crest induction. Development (Cambridge), 2009, 136, 771-779.	2.5	144
90	Cadherin-11 regulates protrusive activity in <i>Xenopus</i> cranial neural crest cells upstream of Trio and the small GTPases. Genes and Development, 2009, 23, 1393-1398.	5.9	118

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91	Cell communication with the neural plate is required for induction of neural markers by BMP inhibition: evidence for homeogenetic induction and implications for Xenopus animal cap and chick explant assays. Developmental Biology, 2009, 327, 478-486.	2.0	40
92	A role for Syndecan-4 in neural induction involving ERK- and PKC-dependent pathways. Development (Cambridge), 2009, 136, 575-584.	2.5	41
93	<i>Wnt11r</i> is required for cranial neural crest migration. Developmental Dynamics, 2008, 237, 3404-3409.	1.8	39
94	GÎ±q negatively regulates the Wntâ€Î²â€catenin pathway and dorsal embryonic <i>Xenopus laevis</i> development. Journal of Cellular Physiology, 2008, 214, 483-490.	4.1	7
95	Contact inhibition of locomotion in vivo controls neural crest directional migration. Nature, 2008, 456, 957-961.	27.8	518
96	A new role for the Endothelin-1/Endothelin-A receptor signaling during early neural crest specification. Developmental Biology, 2008, 323, 114-129.	2.0	61
97	Molecular analysis of neural crest migration. Philosophical Transactions of the Royal Society B: Biological Sciences, 2008, 363, 1349-1362.	4.0	155
98	Directional migration of neural crest cells in vivo is regulated by Syndecan-4/Rac1 and non-canonical Wnt signaling/RhoA. Development (Cambridge), 2008, 135, 1771-1780.	2.5	253
99	Directional cell migration in vivo. Cell Adhesion and Migration, 2008, 2, 240-242.	2.7	53
100	Inhibition of neural crest migration underlies craniofacial dysmorphology and Hirschsprung's disease in Bardetâ€“Biedl syndrome. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6714-6719.	7.1	178
101	Kremen is required for neural crest induction in<i>Xenopus</i>and promotes LRP6-mediated Wnt signaling. Development (Cambridge), 2007, 134, 4255-4263.	2.5	75
102	Snail1a and Snail1b cooperate in the anterior migration of the axial mesendoderm in the zebrafish embryo. Development (Cambridge), 2007, 134, 4073-4081.	2.5	68
103	Neural crests are actively precluded from the anterior neural fold by a novel inhibitory mechanism dependent on Dickkopf1 secreted by the prechordal mesoderm. Developmental Biology, 2007, 309, 208-221.	2.0	54
104	Regulation of <i>XSnail2</i> expression by Rho GTPases. Developmental Dynamics, 2007, 236, 2555-2566.	1.8	31
105	Essential role of non-canonical Wnt signalling in neural crest migration. Development (Cambridge), 2005, 132, 2587-2597.	2.5	259
106	Genetic network during neural crest induction: From cell specification to cell survival. Seminars in Cell and Developmental Biology, 2005, 16, 647-654.	5.0	133
107	Interplay between Notch signaling and the homeoprotein Xiro1 is required for neural crest induction in Xenopus embryos. Development (Cambridge), 2004, 131, 347-359.	2.5	97
108	Identification of neural crest competence territory: Role of Wnt signaling. Developmental Dynamics, 2004, 229, 109-117.	1.8	48

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109	Xenopus paraxishomologue shows novel domains of expression. Developmental Dynamics, 2004, 231, 609-613.	1.8	7
110	Role of BMP signaling and the homeoprotein iroquois in the specification of the cranial placodal field. Developmental Biology, 2004, 272, 89-103.	2.0	93
111	A balance between the anti-apoptotic activity of Slug and the apoptotic activity of msx1 is required for the proper development of the neural crest. Developmental Biology, 2004, 275, 325-342.	2.0	83
112	Regulation of Msx genes by a Bmp gradient is essential for neural crest specification. Development (Cambridge), 2003, 130, 6441-6452.	2.5	277
113	Sox10 is required for the early development of the prospective neural crest in Xenopus embryos. Developmental Biology, 2003, 260, 79-96.	2.0	212
114	<i>Snail</i>precedes<i>Slug</i>in the genetic cascade required for the specification and migration of the<i>Xenopus</i>neural crest. Development (Cambridge), 2003, 130, 483-494.	2.5	194
115	Posteriorization by FGF, Wnt, and Retinoic Acid Is Required for Neural Crest Induction. Developmental Biology, 2002, 241, 289-301.	2.0	220
116	Early induction of neural crest cells: lessons learned from frog, fish and chick. Current Opinion in Genetics and Development, 2002, 12, 452-458.	3.3	152
117	The homeoprotein Xiro1 is required for midbrain-hindbrain boundary formation. Development (Cambridge), 2002, 129, 1609-1621.	2.5	60
118	Extracellular signals, cell interactions and transcription factors involved in the induction of the neural crest cells. Biological Research, 2002, 35, 267-75.	3.4	22
119	The homeoprotein Xiro1 is required for midbrain-hindbrain boundary formation. Development (Cambridge), 2002, 129, 1609-21.	2.5	21
120	Induction and development of neural crest in Xenopus laevis. Cell and Tissue Research, 2001, 305, 203-209.	2.9	75
121	Xiro-1controls mesoderm patterning by repressingbmp-4expression in the spemann organizer. Developmental Dynamics, 2001, 222, 368-376.	1.8	31
122	Calcium mediates dorsoventral patterning of mesoderm in Xenopus. Current Biology, 2001, 11, 1606-1610.	3.9	32
123	Relationship between Gene Expression Domains of Xsnail, Xslug, and Xtwist and Cell Movement in the Prospective Neural Crest of Xenopus. Developmental Biology, 2000, 224, 215-225.	2.0	89
124	A novel function for the Xslug gene: control of dorsal mesendoderm development by repressing BMP-4. Mechanisms of Development, 2000, 97, 47-56.	1.7	48
125	Xenopus brain factor-2 controls mesoderm, forebrain and neural crest development. Mechanisms of Development, 1999, 80, 15-27.	1.7	38
126	Xiro, a Xenopus homolog of the Drosophila Iroquois complex genes, controls development at the neural plate. EMBO Journal, 1998, 17, 181-190.	7.8	133

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127	3 Development of Neural Crest in Xenopus. Current Topics in Developmental Biology, 1998, 43, 85-113.	2.2	59
128	Role of FGF andNogginin Neural Crest Induction. Developmental Biology, 1997, 189, 1-12.	2.0	171
129	Neural Crest Formation in Xenopus laevis: Mechanisms of Xslug Induction. Developmental Biology, 1996, 177, 580-589.	2.0	195
130	Morulae at compaction and the pattern of protein synthesis in mouse embryos. Differentiation, 1994, 55, 175-184.	1.9	2
131	Expression of Xenopus snail in mesoderm and prospective neural fold ectoderm. Developmental Dynamics, 1993, 198, 108-122.	1.8	124
132	Development of cytoskeletal connections between cells of preimplantation mouse embryos. Roux's Archives of Developmental Biology, 1989, 198, 233-241.	1.2	5