

# Shaping Morphogen Gradients

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Unraveling the Mystery of Double Flowers. <i>Developmental Cell</i> , 2001, 1, 4-6.	3.1	16
3	Morphogens: how big is the big picture?. <i>Nature Cell Biology</i> , 2001, 3, E151-E154.	4.6	52
4	Morphogen gradient interpretation. <i>Nature</i> , 2001, 413, 797-803.	13.7	666
5	Wingless signalling: More about the Wingless morphogen. <i>Current Biology</i> , 2001, 11, R638-R639.	1.8	9
6	Morphogen gradients: Nodal enters the stage. <i>Current Biology</i> , 2001, 11, R655-R658.	1.8	6
7	Heads or tails: Wnts and anterior-posterior patterning. <i>Current Biology</i> , 2001, 11, R713-R724.	1.8	240
8	Morphogens. <i>Current Biology</i> , 2001, 11, R851-R854.	1.8	34
9	When cell biology meets development: endocytic regulation of signaling pathways. <i>Genes and Development</i> , 2002, 16, 1314-1336.	2.7	194
10	Spatially restricted patterning cues provided by heparin-binding VEGF-A control blood vessel branching morphogenesis. <i>Genes and Development</i> , 2002, 16, 2684-2698.	2.7	779
11	Wnt Signaling in the Ovary: Identification and Compartmentalized Expression of wnt-2, wnt-2b, and Frizzled-4 mRNAs. <i>Endocrinology</i> , 2002, 143, 2741-2749.	1.4	127
12	Regulation of Endocytosis of Activin Type II Receptors by a Novel PDZ Protein through Ral/Ral-binding Protein 1-dependent Pathway. <i>Journal of Biological Chemistry</i> , 2002, 277, 19008-19018.	1.6	76
13	The Developmentally Regulated Expression of Twisted Gastrulation Reveals a Role for Bone Morphogenetic Proteins in the Control of T Cell Development. <i>Journal of Experimental Medicine</i> , 2002, 196, 163-171.	4.2	75
14	Determining the role of patterned cell proliferation in the shape and size of the <i>Drosophila</i> wing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 7502-7507.	3.3	70
15	Affinity Regulates Spatial Range of EGF Receptor Autocrine Ligand Binding. <i>Developmental Biology</i> , 2002, 250, 305-316.	0.9	40
16	Morphogenetic Apoptosis: A Mechanism for Correcting Discontinuities in Morphogen Gradients. <i>Developmental Biology</i> , 2002, 251, 74-90.	0.9	131
17	AtPIN4 Mediates Sink-Driven Auxin Gradients and Root Patterning in <i>Arabidopsis</i> . <i>Cell</i> , 2002, 108, 661-673.	13.5	763
18	Hedgehog-Mediated Patterning of the Mammalian Embryo Requires Transporter-like Function of Dispatched. <i>Cell</i> , 2002, 111, 63-75.	13.5	283
19	Regulating morphogen gradients in the <i>Drosophila</i> wing. <i>Seminars in Cell and Developmental Biology</i> , 2002, 13, 83-90.	2.3	89

#	ARTICLE	IF	CITATIONS
20	HSPG Modification by the Secreted Enzyme Notum Shapes the Wingless Morphogen Gradient. <i>Developmental Cell</i> , 2002, 2, 667-676.	3.1	227
21	Morphogen Transport along Epithelia, an Integrated Trafficking Problem. <i>Developmental Cell</i> , 2002, 3, 615-623.	3.1	83
22	Modeling Pattern Formation: Counting to Two in the <i>Drosophila</i> Egg. <i>Current Biology</i> , 2002, 12, R493-R495.	1.8	11
23	Argosomes: membrane fragments on the run. <i>Trends in Cell Biology</i> , 2002, 12, 57-60.	3.6	23
24	Morphogen gradients, positional information, and <i>Xenopus</i> : Interplay of theory and experiment. <i>Developmental Dynamics</i> , 2002, 225, 392-408.	0.8	94
25	Translational Regulation in Early Development of Eukaryotes. <i>Molecular Biology</i> , 2002, 36, 773-784.	0.4	15
26	Developmental roles of heparan sulfate proteoglycans in <i>Drosophila</i> . <i>Glycoconjugate Journal</i> , 2002, 19, 363-368.	1.4	58
27	Regulatory Principles of Developmental Signaling. <i>Annual Review of Cell and Developmental Biology</i> , 2002, 18, 515-539.	4.0	136
28	Deletion Mutants of BMP Folding Variants Act as BMP Antagonists and Are Efficient Inhibitors for Heterotopic Ossification. <i>Journal of Bone and Mineral Research</i> , 2003, 18, 2142-2151.	3.1	10
29	Auxin transport "shaping the plant. <i>Current Opinion in Plant Biology</i> , 2003, 6, 7-12.	3.5	648
30	Matrix GLA protein and BMP-2 regulate osteoinduction in calcifying vascular cells. <i>Journal of Cellular Biochemistry</i> , 2003, 90, 756-765.	1.2	165
31	Molecular Control of Epithelial-Mesenchymal Interactions During Hair Follicle Cycling. <i>Journal of Investigative Dermatology Symposium Proceedings</i> , 2003, 8, 46-55.	0.8	268
32	Growth dynamics underlying petal shape and asymmetry. <i>Nature</i> , 2003, 422, 161-163.	13.7	184
33	Efflux-dependent auxin gradients establish the apical-basal axis of <i>Arabidopsis</i> . <i>Nature</i> , 2003, 426, 147-153.	13.7	1,672
34	The <i>Arabidopsis</i> GNOM ARF-GEF Mediates Endosomal Recycling, Auxin Transport, and Auxin-Dependent Plant Growth. <i>Cell</i> , 2003, 112, 219-230.	13.5	1,027
35	bantam Encodes a Developmentally Regulated microRNA that Controls Cell Proliferation and Regulates the Proapoptotic Gene <i>hid</i> in <i>Drosophila</i> . <i>Cell</i> , 2003, 113, 25-36.	13.5	1,889
36	GATA- and Smad1-Dependent Enhancers in the Smad7 Gene Differentially Interpret Bone Morphogenetic Protein Concentrations. <i>Molecular and Cellular Biology</i> , 2003, 23, 6646-6661.	1.1	82
37	Identification of the C-signal, a contact-dependent morphogen coordinating multiple developmental responses in <i>Myxococcus xanthus</i> . <i>Genes and Development</i> , 2003, 17, 2151-2161.	2.7	121

#	ARTICLE	IF	CITATIONS
38	The Hedgehog signaling pathway – implications for drug targets in cancer and neurodegenerative disorders. <i>Pharmacogenomics</i> , 2003, 4, 411-429.	0.6	26
40	<i>Drosophila</i> glypicans control the cell-to-cell movement of Hedgehog by a dynamin-independent process. <i>Development (Cambridge)</i> , 2004, 131, 601-611.	1.2	222
42	Morphogens, their identification and regulation. <i>Development (Cambridge)</i> , 2004, 131, 703-712.	1.2	394
43	Abrogation of heparan sulfate synthesis in <i>Drosophila</i> disrupts the Wingless, Hedgehog and Decapentaplegic signaling pathways. <i>Development (Cambridge)</i> , 2004, 131, 1927-1938.	1.2	205
44	Synergistic and antagonistic roles of the Sonic hedgehog N- and C-terminal lipids. <i>Development (Cambridge)</i> , 2004, 131, 4357-4370.	1.2	72
45	The genetics of geometry. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 4728-4735.	3.3	252
46	Distinct and collaborative roles of <i>Drosophila</i> EXT family proteins in morphogen signalling and gradient formation. <i>Development (Cambridge)</i> , 2004, 131, 1563-1575.	1.2	206
47	<i>Drosophila</i> genetic variants that change cell size and rate of proliferation affect cell communication and hence patterning. <i>Mechanisms of Development</i> , 2004, 121, 351-364.	1.7	11
48	Functions of heparan sulfate proteoglycans in cell signaling during development. <i>Development (Cambridge)</i> , 2004, 131, 6009-6021.	1.2	569
49	<i>Drosophila</i> Dpp Morphogen Movement Is Independent of Dynamin-Mediated Endocytosis but Regulated by the Glypican Members of Heparan Sulfate Proteoglycans. <i>Cell</i> , 2004, 119, 231-244.	13.5	275
50	The role of the T-box gene <i>optomotor-blind</i> in patterning the <i>Drosophila</i> wing. <i>Developmental Biology</i> , 2004, 268, 481-492.	0.9	45
51	Planar cell polarity in the vertebrate inner ear. <i>Advances in Developmental Biology (Amsterdam,)</i> Tj ETQq1 1 0.784314 rgBT /Qverlock	0.4	1
52	Engineered spatial patterns of FGF-2 immobilized on fibrin direct cell organization. <i>Biomaterials</i> , 2005, 26, 6762-6770.	5.7	141
53	Mechanisms of morphogen movement. <i>Journal of Neurobiology</i> , 2005, 64, 324-333.	3.7	25
54	Morphogens and cell survival during development. <i>Journal of Neurobiology</i> , 2005, 64, 357-366.	3.7	29
55	Mechanisms of Hedgehog gradient formation and interpretation. <i>Journal of Neurobiology</i> , 2005, 64, 334-356.	3.7	73
56	Planar cell polarity and a potential role for a Wnt morphogen gradient in stereociliary bundle orientation in the mammalian inner ear. <i>Journal of Neurobiology</i> , 2005, 64, 446-457.	3.7	84
57	Patterned cell determination in a plant tissue: The secondary phloem of trees. <i>BioEssays</i> , 2005, 27, 533-541.	1.2	12

#	ARTICLE	IF	CITATIONS
59	The cell: fundamental unit of developmental systems. , 2005, , 6-23.		0
60	Fertilization: generating one living dynamical system from two. , 2005, , 223-247.		0
61	Cell states: stability, oscillation, differentiation. , 2005, , 51-76.		0
62	Pattern formation: segmentation, axes, and asymmetry. , 2005, , 155-187.		0
63	Evolution of developmental mechanisms. , 2005, , 248-272.		0
64	Introduction: Biology and physics. , 2005, , 1-5.		0
65	Cleavage and blastula formation. , 2005, , 24-50.		2
66	Cell adhesion, compartmentalization, and lumen formation. , 2005, , 77-98.		0
67	Epithelial morphogenesis: gastrulation and neurulation. , 2005, , 99-130.		0
68	Mesenchymal morphogenesis. , 2005, , 131-154.		0
69	Organogenesis. , 2005, , 188-222.		0
72	Cell Fate and Polarity. , 2005, , 305-329.		0
73	Engineering Gene Networks to Emulate Drosophila Embryonic Pattern Formation. PLoS Biology, 2005, 3, e64.	2.6	111
75	Drosophila glypicans Dally and Dally-like shape the extracellular Wingless morphogen gradient in the wing disc. Development (Cambridge), 2005, 132, 667-679.	1.2	190
76	Mutual repression between msh and Iro-C is an essential component of the boundary between body wall and wing in Drosophila. Development (Cambridge), 2005, 132, 4087-4096.	1.2	18
77	Morphogen Gradient from a Noisy Source. Physical Review Letters, 2005, 94, 078101.	2.9	38
78	Novel brain wiring functions for classical morphogens: a role as graded positional cues in axon guidance. Development (Cambridge), 2005, 132, 2251-2262.	1.2	214
79	Effects of Sog on Dpp-Receptor Binding. SIAM Journal on Applied Mathematics, 2005, 65, 1748-1771.	0.8	25

#	ARTICLE	IF	CITATIONS
80	Interpreting clone-mediated perturbations of morphogen profiles. <i>Developmental Biology</i> , 2005, 278, 203-207.	0.9	13
81	<i>Drosophila Limb Development.</i> , 2005, , 305-341.		3
82	Endocytosis, Endosome Trafficking, and the Regulation of <i>Drosophila</i> Development. <i>Annual Review of Cell and Developmental Biology</i> , 2006, 22, 181-206.	4.0	71
83	Spatially dependent activation of the patterning protease, Easter. <i>FEBS Letters</i> , 2006, 580, 2269-2272.	1.3	13
84	Quantifying the Gurken Morphogen Gradient in <i>Drosophila</i> Oogenesis. <i>Developmental Cell</i> , 2006, 11, 263-272.	3.1	78
85	Endocytic trafficking of Wingless and its receptors, Arrow and DFrizzled-2, in the <i>Drosophila</i> wing. <i>Developmental Biology</i> , 2006, 293, 268-283.	0.9	74
86	Cell lineage transport: a mechanism for molecular gradient formation. <i>Molecular Systems Biology</i> , 2006, 2, 57.	3.2	20
87	Transfer of differentiation signal by membrane microvesicles harboring hedgehog morphogens. <i>Blood</i> , 2006, 108, 3012-3020.	0.6	114
88	Auxin/gibberellin interactions in pea leaf morphogenesis. <i>Botanical Journal of the Linnean Society</i> , 2006, 150, 45-59.	0.8	10
89	Epithelial Trafficking of Sonic Hedgehog by Megalin. <i>Journal of Histochemistry and Cytochemistry</i> , 2006, 54, 1115-1127.	1.3	31
90	Pattern formation in a gene network model with boundary shape dependence. <i>Physical Review E</i> , 2006, 73, 031917.	0.8	20
91	On the mechanism of wing size determination in fly development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 3835-3840.	3.3	327
92	Axon Growth and Guidance. <i>Advances in Experimental Medicine and Biology</i> , 2007, , .	0.8	6
93	The BMP Ligand Gbb Gates the Expression of Synaptic Homeostasis Independent of Synaptic Growth Control. <i>Neuron</i> , 2007, 56, 109-123.	3.8	115
94	Kinetic and Structural Studies on Interactions between Heparin or Heparan Sulfate and Proteins of the Hedgehog Signaling Pathway. <i>Biochemistry</i> , 2007, 46, 3933-3941.	1.2	71
95	The Hedgehog, TGF- $\beta$ /BMP and Wnt Families of Morphogens in Axon Guidance. <i>Advances in Experimental Medicine and Biology</i> , 2007, 621, 116-133.	0.8	60
96	Interaction of epithelium with mesenchyme affects global features of lung architecture: a computer model of development. <i>Journal of Applied Physiology</i> , 2007, 102, 294-305.	1.2	16
97	Navigating their way to the clinic: Emerging roles for axon guidance molecules in neurological disorders and injury. <i>Developmental Neurobiology</i> , 2007, 67, 1216-1231.	1.5	74

#	ARTICLE	IF	CITATIONS
98	Apical and lateral cell protrusions interconnect epithelial cells in live <i>Drosophila</i> wing imaginal discs. <i>Developmental Dynamics</i> , 2007, 236, 3408-3418.	0.8	38
99	Sharp boundaries of Dpp signalling trigger local cell death required for <i>Drosophila</i> leg morphogenesis. <i>Nature Cell Biology</i> , 2007, 9, 57-63.	4.6	100
100	TGF $\beta$ -SMAD signal transduction: molecular specificity and functional flexibility. <i>Nature Reviews Molecular Cell Biology</i> , 2007, 8, 970-982.	16.1	1,129
101	Computational analysis of BMP gradients in dorsal-ventral patterning of the zebrafish embryo. <i>Journal of Theoretical Biology</i> , 2007, 248, 579-589.	0.8	31
102	Compact integration factor methods in high spatial dimensions. <i>Journal of Computational Physics</i> , 2008, 227, 5238-5255.	1.9	66
104	Hedgehog: functions and mechanisms. <i>Genes and Development</i> , 2008, 22, 2454-2472.	2.7	1,087
105	The gradient of Gurken, a long-range morphogen, is directly regulated by Cbl-mediated endocytosis. <i>Development (Cambridge)</i> , 2008, 135, 1923-1933.	1.2	36
106	Optimal placement of multiple morphogen sources. <i>Physical Review E</i> , 2008, 77, 041909.	0.8	16
107	Theoretical and experimental approaches to understand morphogen gradients. <i>Molecular Systems Biology</i> , 2008, 4, 176.	3.2	46
108	Morphogens: History. , 2009, , 975-979.		0
109	Accuracy of positional information provided by multiple morphogen gradients with correlated noise. <i>Physical Review E</i> , 2009, 79, 061905.	0.8	29
110	Stippling the Skin: Generation of Anatomical Periodicity by Reaction-Diffusion Mechanisms. <i>Mathematical Modelling of Natural Phenomena</i> , 2009, 4, 83-102.	0.9	15
111	When it pays to rush: interpreting morphogen gradients prior to steady-state. <i>Physical Biology</i> , 2009, 6, 046020.	0.8	31
112	Robust Generation and Decoding of Morphogen Gradients. <i>Cold Spring Harbor Perspectives in Biology</i> , 2009, 1, a001990-a001990.	2.3	75
113	Particle tracking model of electrophoretic morphogen movement reveals stochastic dynamics of embryonic gradient. <i>Developmental Dynamics</i> , 2009, 238, 1923-1935.	0.8	23
114	Application of Discontinuous Galerkin Methods for Reaction-Diffusion Systems in Developmental Biology. <i>Journal of Scientific Computing</i> , 2009, 40, 391-418.	1.1	68
115	Localized Ectopic Expression of Dpp Receptors in <i>Drosophila</i> Embryo. <i>Studies in Applied Mathematics</i> , 2009, 123, 175-214.	1.1	10
116	Auxin: A Trigger for Change in Plant Development. <i>Cell</i> , 2009, 136, 1005-1016.	13.5	1,102

#	ARTICLE	IF	CITATIONS
117	Interpretation of the UPD/JAK/STAT morphogen gradient in Drosophila follicle cells. <i>Cell Cycle</i> , 2009, 8, 2918-2926.	1.3	24
118	Global analysis of alternative splicing regulation by insulin and wingless signaling in Drosophila cells. <i>Genome Biology</i> , 2009, 10, R11.	13.9	42
119	Inkjet-Based Biopatterning of Bone Morphogenetic Protein-2 to Spatially Control Calvarial Bone Formation. <i>Tissue Engineering - Part A</i> , 2010, 16, 1749-1759.	1.6	105
120	Spatially directed guidance of stem cell population migration by immobilized patterns of growth factors. <i>Biomaterials</i> , 2011, 32, 2775-2785.	5.7	85
122	An IL-12/Shh-C domain fusion protein-based IL-12 autocrine loop for sustained natural killer cell activation. <i>International Journal of Oncology</i> , 2012, 41, 661-669.	1.4	6
123	Morphogenetic fields in embryogenesis, regeneration, and cancer: Non-local control of complex patterning. <i>BioSystems</i> , 2012, 109, 243-261.	0.9	178
124	Approximate analytical solutions of Schnakenberg systems by homotopy analysis method. <i>Applied Mathematical Modelling</i> , 2012, 36, 4789-4796.	2.2	22
125	Bone morphogenetic proteins regulate hinge point formation during neural tube closure by dynamic modulation of apicobasal polarity. <i>Birth Defects Research Part A: Clinical and Molecular Teratology</i> , 2012, 94, 804-816.	1.6	27
126	Computational Modeling of Mass Transport and Its Relation to Cell Behavior in Tissue Engineering Constructs. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , 2012, , 85-105.	0.7	3
127	The Imperatives of Context and Contour for Morphogen Dispersion. <i>Biophysical Journal</i> , 2012, 103, 2252-2256.	0.2	28
129	Apicobasal polarity and neural tube closure. <i>Development Growth and Differentiation</i> , 2013, 55, 164-172.	0.6	22
130	Mutation of <i>sepJ</i> reduces the intercellular signal range of a <i>hetN</i> -dependent paracrine signal, but not of a <i>patS</i> -dependent signal, in the filamentous cyanobacterium <i>A. nabaena</i> sp. strain PCC 7120. <i>Molecular Microbiology</i> , 2014, 94, 1260-1271.	1.2	23
131	Tissue landscape alters adjacent cell fates during Drosophila egg development. <i>Nature Communications</i> , 2015, 6, 7356.	5.8	12
133	BMP signaling modulates the probability of neurotransmitter release and readily releasable pools in Drosophila neuromuscular junction synapses. <i>Biochemical and Biophysical Research Communications</i> , 2016, 479, 440-446.	1.0	8
134	Modeling biological gradient formation: combining partial differential equations and Petri nets. <i>Natural Computing</i> , 2016, 15, 665-675.	1.8	2
135	Morphogens: History, 2017, , .		0
136	Wnt and Hedgehog: Secretion of Lipid-Modified Morphogens. <i>Trends in Cell Biology</i> , 2018, 28, 157-170.	3.6	58
138	The enigmatic fetal subplate compartment forms an early tangential cortical nexus and provides the framework for construction of cortical connectivity. <i>Progress in Neurobiology</i> , 2020, 194, 101883.	2.8	66



#	ARTICLE	IF	CITATIONS
139	Diversity and robustness of bone morphogenetic protein pattern formation. <i>Development</i> (Cambridge), 2021, 148, .	1.2	17
140	Contact-mediated cellular communication supplements positional information to regulate spatial patterning during development. <i>Physical Review E</i> , 2021, 103, 062409.	0.8	4
141	BMPs in Development. , 2003, , 833-837.		1
143	Cholesterol modification of Hedgehog family proteins. <i>Journal of Clinical Investigation</i> , 2002, 110, 591-596.	3.9	82
144	Cholesterol modification of Hedgehog family proteins. <i>Journal of Clinical Investigation</i> , 2002, 110, 591-596.	3.9	55
145	Modeling and computational analysis of EGF receptor-mediated cell communication in <i>Drosophila</i> oogenesis. <i>Development</i> (Cambridge), 2002, 129, 2577-2589.	1.2	100
146	Dpp signalling is a key effector of the wing-body wall subdivision of the <i>Drosophila</i> mesothorax. <i>Development</i> (Cambridge), 2002, 129, 3815-3823.	1.2	27
147	Pax6 regulates specification of ventral neurone subtypes in the hindbrain by establishing progenitor domains. <i>Development</i> (Cambridge), 2002, 129, 1327-1338.	1.2	110
148	Building a Morphogen Gradient without Diffusion in a Growing Tissue. <i>PLoS ONE</i> , 2010, 5, e12857.	1.1	20
149	Multiple stable steady states of a reaction-diffusion model on zebrafish dorsal-ventral patterning. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2011, 4, 1413-1428.	0.6	7
150	Transfer of phenylpropanoids via the medium between xylem cells in <i>Zinnia</i> xylogenetic culture. <i>Plant Biotechnology</i> , 2004, 21, 205-213.	0.5	6
151	Positionsinformation, Musterbildung und embryonale Induktion. <i>Springer-Lehrbuch</i> , 2003, , 283-338.	0.1	0
152	Control of Development and Homeostasis Via Regulation of BMP, Wnt, and Hedgehog Signaling. , 2004, , 113-130.		0
153	Growth Factor Signaling Pathways in Cancer. , 2004, , 267-315.		0
154	BMPs in Development. , 2010, , 1905-1912.		1
156	Flags, landscapes and signaling: contact-mediated inter-cellular interactions enable plasticity in fate determination driven by positional information. <i>Indian Journal of Physics</i> , 0, , 1.	0.9	0
158	Fractional Reactionâ€“Diffusion Model: An Efficient Computational Technique for Nonlinear Time-Fractional Schnakenberg Model. <i>Lecture Notes in Networks and Systems</i> , 2023, , 427-454.	0.5	1