James Sharpe

List of Publications by Year
in descending order

98 papers	7,659 citations	57758 44 h-index	54911 84 g-index
104 all docs	104 docs citations	104 times ranked	8550 citing authors

#	Article	IF	Citations
1	Arrested coalescence of multicellular aggregates. Soft Matter, 2022, 18, 3771-3780.	2.7	9
2	Dose dependent effects of green tea extracts in the skeletal development of a Down syndrome mouse model. FASEB Journal, 2022, 36, .	0.5	0
3	Î¼Match: 3D Shape Correspondence for Biological Image Data. Frontiers in Computer Science, 2022, 4, .	2.8	6
4	ViceCT and whiceCT for simultaneous high-resolution visualization of craniofacial, brain and ventricular anatomy from micro-computed tomography. Scientific Reports, 2020, 10, 18772.	3.3	4
5	Salivary gland macrophages and tissue-resident CD8 ⁺ T cells cooperate for homeostatic organ surveillance. Science Immunology, 2020, 5, .	11.9	57
6	Topologically selective islet vulnerability and self-sustained downregulation of markers for Î²-cell maturity in streptozotocin-induced diabetes. Communications Biology, 2020, 3, 541.	4.4	22
7	Toward Controllable Morphogenesis in Large Robot Swarms. IEEE Robotics and Automation Letters, 2019, 4, 3386-3393.	5.1	9
8	ya||a: GPU-Powered Spheroid Models for Mesenchyme and Epithelium. Cell Systems, 2019, 8, 261-266.e3.	6.2	33
9	Wolpert's French Flag: what's the problem?. Development (Cambridge), 2019, 146, .	2.5	31
10	Sequences Generated by Powers of the <i>k</i>th-order Fibonacci Recurrence Relation. American Mathematical Monthly, 2018, 125, 443-446.	0.3	0
11	A quantitative method for staging mouse embryos based on limb morphometry. Development (Cambridge), 2018, 145, .	2.5	16
12	Attenuation artifacts in light sheet fluorescence microscopy corrected by OPTiSPIM. Light: Science and Applications, 2018, 7, 70.	16.6	21
13	Perspective: The promise of multi-cellular engineered living systems. APL Bioengineering, 2018, 2, 040901.	6.2	110
14	Synthetic circuits reveal how mechanisms of gene regulatory networks constrain evolution. Molecular Systems Biology, 2018, 14, e8102.	7.2	34
15	The Rho regulator Myosin IXb enables nonlymphoid tissue seeding of protective CD8+ T cells. Journal of Experimental Medicine, 2018, 215, 1869-1890.	8.5	22
16	Quantification of gene expression patterns to reveal the origins of abnormal morphogenesis. ELife, 2018, 7, .	6.0	12
17	A spectrum of modularity in multiâ€functional gene circuits. Molecular Systems Biology, 2017, 13, 925.	7.2	62
18	Antigen Availability and DOCK2-Driven Motility Govern CD4+ T Cell Interactions with Dendritic Cells In Vivo. Journal of Immunology, 2017, 199, 520-530.	0.8	21

#	ARTICLE	IF	CITATIONS
19	Migratory appendicular muscles precursor cells in the common ancestor to all vertebrates. Nature Ecology and Evolution, 2017, 1, 1731-1736.	7.8	21
20	Computer modeling in developmental biology: growing today, essential tomorrow. Development (Cambridge), 2017, 144, 4214-4225.	2.5	78
21	The fin-to-limb transition as the re-organization of a Turing pattern. Nature Communications, 2016, 7, 11582.	12.8	80
22	pMHC affinity controls duration of CD8+ T cellâ€"DC interactions and imprints timing of effector differentiation versus expansion. Journal of Experimental Medicine, 2016, 213, 2811-2829.	8.5	101
23	Light sheet fluorescence microscopy for in situ cell interaction analysis in mouse lymph nodes. Journal of Immunological Methods, 2016, 431, 1-10.	1.4	27
24	Geometric Morphometrics on Gene Expression Patterns Within Phenotypes: A Case Example on Limb Development. Systematic Biology, 2016, 65, 194-211.	5.6	12
25	High-throughput mathematical analysis identifies Turing networks for patterning with equally diffusing signals. ELife, 2016, 5, .	6.0	108
26	Dataâ€driven modelling of a gene regulatory network for cell fate decisions in the growing limbÂbud. Molecular Systems Biology, 2015, 11, 815.	7.2	36
27	Decrease in Cell Volume Generates Contractile Forces Driving Dorsal Closure. Developmental Cell, 2015, 33, 611-621.	7.0	99
28	Positional information and reaction-diffusion: two big ideas in developmental biology combine. Development (Cambridge), 2015, 142, 1203-1211.	2.5	317
29	Dynamics of gene circuits shapes evolvability. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2103-2108.	7.1	42
30	A Local, Self-Organizing Reaction-Diffusion Model Can Explain Somite Patterning in Embryos. Cell Systems, 2015, 1, 257-269.	6.2	79
31	A shift in anteriorâ€"posterior positional information underlies the fin-to-limb evolution. ELife, 2015, 4, .	6.0	46
32	A unified design space of synthetic stripe-forming networks. Nature Communications, 2014, 5, 4905.	12.8	128
33	ESCRT-II/Vps25 Constrains Digit Number by Endosome-Mediated Selective Modulation of FGF-SHH Signaling. Cell Reports, 2014, 9, 674-687.	6.4	12
34	Immobilized chicks as a model system for earlyâ€onset developmental dysplasia of the hip. Journal of Orthopaedic Research, 2014, 32, 777-785.	2.3	56
35	Joint shape morphogenesis precedes cavitation of the developing hip joint. Journal of Anatomy, 2014, 224, 482-489.	1.5	48
36	Cells unite by trapping a signal. Nature, 2014, 515, 41-42.	27.8	0

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37	OPTiSPIM: integrating optical projection tomography in light sheet microscopy extends specimen characterization to nonfluorescent contrasts. Optics Letters, 2014, 39, 1053.	3.3	44
38	Design principles of stripe-forming motifs: the role of positive feedback. Scientific Reports, 2014, 4, 5003.	3.3	20
39	On the concept of mechanism in development. , 2014, , 56-78.		26
40	Senescence Is a Developmental Mechanism that Contributes to Embryonic Growth and Patterning. Cell, 2013, 155, 1119-1130.	28.9	898
41	Naive B-cell trafficking is shaped by local chemokine availability and LFA-1â€“independent stromal interactions. Blood, 2013, 121, 4101-4109.	1.4	32
42	A GDF5 Point Mutation Strikes Twice - Causing BDA1 and SYNS2. PLoS Genetics, 2013, 9, e1003846.	3.5	34
43	Near Infrared Optical Projection Tomography for Assessments of β-cell Mass Distribution in Diabetes Research. Journal of Visualized Experiments, 2013, , e50238.	0.3	37
44	Mechanistic Explanations for Restricted Evolutionary Paths That Emerge from Gene Regulatory Networks. PLoS ONE, 2013, 8, e61178.	2.5	11
45	Intravital imaging of hair-cell development and regeneration in the zebrafish. Frontiers in Neuroanatomy, 2013, 7, 33.	1.7	17
46	Quantitative Measurements in 3-Dimensional Datasets of Mouse Lymph Nodes Resolve Organ-Wide Functional Dependencies. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-8.	1.3	16
47	Image formation by linear and nonlinear digital scanned light-sheet fluorescence microscopy with Gaussian and Bessel beam profiles. Biomedical Optics Express, 2012, 3, 1492.	2.9	83
48	In-silico organogenesis: Image-driven modelling of limb development. , 2012, , .		1
49	<i>Hox</i> Genes Regulate Digit Patterning by Controlling the Wavelength of a Turing-Type Mechanism. Science, 2012, 338, 1476-1480.	12.6	309
50	Turing patterns in development: what about the horse part?. Current Opinion in Genetics and Development, 2012, 22, 578-584.	3.3	87
51	A global â€œimagingâ€™â€™ view on systems approaches in immunology. European Journal of Immunology, 2012, 42, 3116-3125.	2.9	32
52	Image Processing Assisted Algorithms for Optical Projection Tomography. IEEE Transactions on Medical Imaging, 2012, 31, 1-15.	8.9	45
53	Inâ€silico organogenesis: measuring and modelling vertebrate limb development. FASEB Journal, 2012, 26, 337.3.	0.5	0
54	Two ways to use imaging: focusing directly on mechanism, or indirectly via behaviour?. Current Opinion in Genetics and Development, 2011, 21, 523-529.	3.3	6

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55	Budding behaviors: Growth of the limb as a model of morphogenesis. Developmental Dynamics, 2011, 240, 1054-1062.	1.8	46
56	Control of pelvic girdle development by genes of the Pbx family and <i>Emx2</i>. Developmental Dynamics, 2011, 240, 1173-1189.	1.8	32
57	4D retrospective lineage tracing using SPIM for zebrafish organogenesis studies. Journal of Biophotonics, 2011, 4, 122-134.	2.3	49
58	A landmark-free morphometric staging system for the mouse limb bud. Development (Cambridge), 2011, 138, 1227-1234.	2.5	36
59	<i>N-myc</i>Controls Proliferation, Morphogenesis, and Patterning of the Inner Ear. Journal of Neuroscience, 2011, 31, 7178-7189.	3.6	46
60	Optical Projection Tomography of Vertebrate Embryo Development. Cold Spring Harbor Protocols, 2011, 2011, pdb.top116.	0.3	27
61	A Computational Clonal Analysis of the Developing Mouse Limb Bud. PLoS Computational Biology, 2011, 7, e1001071.	3.2	32
62	Preparation of Mouse Embryos for Optical Projection Tomography Imaging. Cold Spring Harbor Protocols, 2011, 2011, pdb.prot5639-pdb.prot5639.	0.3	23
63	An atlas of gene regulatory networks reveals multiple threeâ€gene mechanisms for interpreting morphogen gradients. Molecular Systems Biology, 2010, 6, 425.	7.2	153
64	Mechanobiology of embryonic skeletal development: Insights from animal models. Birth Defects Research Part C: Embryo Today Reviews, 2010, 90, 203-213.	3.6	134
65	Scapula development is governed by genetic interactions of<i>Pbx1</i>with its family members and with<i>Emx2</i>via their cooperative control of<i>Alx1</i>. Development (Cambridge), 2010, 137, 2559-2569.	2.5	65
66	Quantification and Three-Dimensional Imaging of the Insulitis-Induced Destruction of Î²-Cells in Murine Type 1 Diabetes. Diabetes, 2010, 59, 1756-1764.	0.6	88
67	The Role of Spatially Controlled Cell Proliferation in Limb Bud Morphogenesis. PLoS Biology, 2010, 8, e1000420.	5.6	175
68	Clonal Analysis in Mice Underlines the Importance of Rhombomeric Boundaries in Cell Movement Restriction during Hindbrain Segmentation. PLoS ONE, 2010, 5, e10112.	2.5	37
69	Genetic background influences embryonic lethality and the occurrence of neural tube defects in Men1 null mice: relevance to genetic modifiers. Journal of Endocrinology, 2009, 203, 133-142.	2.6	38
70	Gene expression analysis of canonical Wnt pathway transcriptional regulators during early morphogenesis of the facial region in the mouse embryo. Gene Expression Patterns, 2009, 9, 296-305.	0.8	14
71	Evidence that Fgf10 contributes to the skeletal and visceral defects of an apert syndrome mouse model. Developmental Dynamics, 2009, 238, 376-385.	1.8	48
72	Live optical projection tomography. Organogenesis, 2009, 5, 211-216.	1.2	49

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73	Optical Projection Tomography. , 2009, , 199-224.		3
74	Fluorescence lifetime optical projection tomography. Journal of Biophotonics, 2008, 1, 390-394.	2.3	62
75	In vitro whole-organ imaging: 4D quantification of growing mouse limb buds. Nature Methods, 2008, 5, 609-612.	19.0	95
76	3D representation of Wnt and Frizzled gene expression patterns in the mouse embryo at embryonic day 11.5 (Ts19). Gene Expression Patterns, 2008, 8, 331-348.	0.8	84
77	Localization and fate of Fgf10-expressing cells in the adult mouse brain implicate Fgf10 in control of neurogenesis. Molecular and Cellular Neurosciences, 2008, 37, 857-868.	2.2	43
78	High-resolution three-dimensional imaging of islet-infiltrate interactions based on optical projection tomography assessments of the intact adult mouse pancreas. Journal of Biomedical Optics, 2008, 13, 1.	2.6	46
79	Cell tracing reveals a dorsoventral lineage restriction plane in the mouse limb bud mesenchyme. Development (Cambridge), 2007, 134, 3713-3722.	2.5	64
80	Resolution improvement in emission optical projection tomography. Physics in Medicine and Biology, 2007, 52, 2775-2790.	3.0	95
81	FishNet: an online database of zebrafish anatomy. BMC Biology, 2007, 5, 34.	3.8	56
82	Tomographic molecular imaging and 3D quantification within adult mouse organs. Nature Methods, 2007, 4, 31-33.	19.0	178
83	Three-Dimensional Imaging of Drosophila melanogaster. PLoS ONE, 2007, 2, e834.	2.5	66
84	Novel Techniques for 3D Biological Microscopy. , 2007, , .		0
85	Spleen versus pancreas: strict control of organ interrelationship revealed by analyses of Bapx1-/- mice. Genes and Development, 2006, 20, 2208-2213.	5.9	68
86	Visualizing Plant Development and Gene Expression in Three Dimensions Using Optical Projection Tomography. Plant Cell, 2006, 18, 2145-2156.	6.6	127
87	Correction of artefacts in optical projection tomography. Physics in Medicine and Biology, 2005, 50, 4645-4665.	3.0	99
88	3D modelling, gene expression mapping and post-mapping image analysis in the developing human brain. Brain Research Bulletin, 2005, 66, 449-453.	3.0	26
89	3 dimensional modelling of early human brain development using optical projection tomography. BMC Neuroscience, 2004, 5, 27.	1.9	69
90	Optical Projection Tomography. Annual Review of Biomedical Engineering, 2004, 6, 209-228.	12.3	174

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91	EMAP and EMAGE: A Framework for Understanding Spatially Organized Data. Neuroinformatics, 2003, 1, 309-326.	2.8	109
92	Optical projection tomography as a new tool for studying embryo anatomy. Journal of Anatomy, 2003, 202, 175-181.	1.5	156
93	Optical Projection Tomography as a Tool for 3D Microscopy and Gene Expression Studies. Science, 2002, 296, 541-545.	12.6	1,129
94	3D confocal reconstruction of gene expression in mouse. Mechanisms of Development, 2001, 100, 59-63.	1.7	43
95	Identification of Sonic hedgehog as a candidate gene responsible for the polydactylous mouse mutant Sasquatch. Current Biology, 1999, 9, 97-S1.	3.9	125
96	Reprogramming Hox Expression in the Vertebrate Hindbrain: Influence of Paraxial Mesoderm and Rhombomere Transposition. Neuron, 1996, 16, 487-500.	8.1	189
97	Other Organs. , 0, , 311-332.		0
98	ya||a: GPU-powered Spheroid Models for Mesenchyme and Epithelium. SSRN Electronic Journal, 0, , .	0.4	0