Jason M Haugh

List of Publications by Year
in descending order

84 papers	3,114 citations	147566 31 h-index	168136 53 g-index
89 all docs	89 docs citations	89 times ranked	3829 citing authors

#	Article	IF	Citations
1	Spatial Sensing in Fibroblasts Mediated by 3â€² Phosphoinositides. Journal of Cell Biology, 2000, 151, 1269-1280.	2.3	289
2	Profilin-1 Serves as a Gatekeeper for Actin Assembly by Arp2/3-Dependent and -Independent Pathways. Developmental Cell, 2015, 32, 54-67.	3.1	241
3	Directed migration of mesenchymal cells: where signaling and the cytoskeleton meet. Current Opinion in Cell Biology, 2014, 30, 74-82.	2.6	150
4	Internalized Epidermal Growth Factor Receptors Participate in the Activation of p21 in Fibroblasts. Journal of Biological Chemistry, 1999, 274, 34350-34360.	1.6	134
5	Effect of Epidermal Growth Factor Receptor Internalization on Regulation of the Phospholipase C-Î³1 Signaling Pathway. Journal of Biological Chemistry, 1999, 274, 8958-8965.	1.6	104
6	Quantitative elucidation of a distinct spatial gradient-sensing mechanism in fibroblasts. Journal of Cell Biology, 2005, 171, 883-892.	2.3	101
7	Migrating fibroblasts reorient directionality by a metastable, PI3K-dependent mechanism. Journal of Cell Biology, 2012, 197, 105-114.	2.3	93
8	Kinetic Analysis of Platelet-derived Growth Factor Receptor/Phosphoinositide 3-Kinase/Akt Signaling in Fibroblasts. Journal of Biological Chemistry, 2003, 278, 37064-37072.	1.6	89
9	F-actin bundles direct the initiation and orientation of lamellipodia through adhesion-based signaling. Journal of Cell Biology, 2015, 208, 443-455.	2.3	87
10	Systematic Quantification of Negative Feedback Mechanisms in the Extracellular Signal-regulated Kinase (ERK) Signaling Network. Journal of Biological Chemistry, 2010, 285, 36736-36744.	1.6	80
11	Spontaneous phosphoinositide 3-kinase signaling dynamics drive spreading and random migration of fibroblasts. Journal of Cell Science, 2009, 122, 313-323.	1.2	76
12	Mechanisms of Gradient Sensing and Chemotaxis: Conserved Pathways, Diverse Regulation. Cell Cycle, 2006, 5, 1130-1134.	1.3	74
13	Allosteric Modulation of Ras-GTP Is Linked to Signal Transduction through RAF Kinase. Journal of Biological Chemistry, 2011, 286, 3323-3331.	1.6	74
14	Physical modulation of intracellular signaling processes by locational regulation. Biophysical Journal, 1997, 72, 2014-2031.	0.2	72
15	Mesenchymal Chemotaxis Requires Selective Inactivation of Myosin II at the Leading Edge via a Noncanonical PLCÎ³/PKCÎ± Pathway. Developmental Cell, 2014, 31, 747-760.	3.1	72
16	PI3Kâ€dependent crossâ€talk interactions converge with Ras as quantifiable inputs integrated by Erk. Molecular Systems Biology, 2009, 5, 246.	3.2	69
17	Active EGF receptors have limited access to PtdIns(4,5)<i>P</i>2 in endosomes: implications for phospholipase C and PI 3-kinase signaling. Journal of Cell Science, 2002, 115, 303-310.	1.2	60
18	Signaling pathways that control cell migration: models and analysis. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2011, 3, 231-240.	6.6	59

#	Article	IF	Citations
19	Dataâ€driven modeling reconciles kinetics of <scp>ERK</scp> phosphorylation, localization, and activity states. Molecular Systems Biology, 2014, 10, 718.	3.2	54
20	Lamellipodia are critical for haptotactic sensing and response. Journal of Cell Science, 2016, 129, 2329-42.	1.2	53
21	Deterministic Model of Dermal Wound Invasion Incorporating Receptor-Mediated Signal Transduction and Spatial Gradient Sensing. Biophysical Journal, 2006, 90, 2297-2308.	0.2	52
22	Stochastic Model of Integrin-Mediated Signaling and Adhesion Dynamics at the Leading Edges of Migrating Cells. PLoS Computational Biology, 2010, 6, e1000688.	1.5	52
23	Analysis of Receptor Internalization as a Mechanism for Modulating Signal Transduction. Journal of Theoretical Biology, 1998, 195, 187-218.	0.8	50
24	Directional Persistence of Cell Migration Coincides with Stability of Asymmetric Intracellular Signaling. Biophysical Journal, 2010, 98, 67-75.	0.2	47
25	Active EGF receptors have limited access to PtdIns(4,5)P(2) in endosomes: implications for phospholipase C and PI 3-kinase signaling. Journal of Cell Science, 2002, 115, 303-10.	1.2	47
26	Structure-Based Kinetic Models of Modular Signaling Protein Function: Focus on Shp2. Biophysical Journal, 2007, 92, 2290-2300.	0.2	46
27	Localization of Receptor-Mediated Signal Transduction Pathways: The Inside Story. Molecular Interventions: Pharmacological Perspectives From Biology, Chemistry and Genomics, 2002, 2, 292-307.	3.4	43
28	Mathematical modeling of epidermal growth factor receptor signaling through the phospholipase C pathway: Mechanistic insights and predictions for molecular interventions. Biotechnology and Bioengineering, 2000, 70, 225-238.	1.7	41
29	Guidelines for visualizing and annotating rule-based models. Molecular BioSystems, 2011, 7, 2779.	2.9	36
30	Scratching the (cell) surface: cytokine engineering for improved ligand/receptor trafficking dynamics. Chemistry and Biology, 1998, 5, R257-R263.	6.2	34
31	Spatial Analysis of 3â€² Phosphoinositide Signaling in Living Fibroblasts: II. Parameter Estimates for Individual Cells from Experiments. Biophysical Journal, 2004, 86, 599-608.	0.2	34
32	A Unified Model for Signal Transduction Reactions in Cellular Membranes. Biophysical Journal, 2002, 82, 591-604.	0.2	32
33	GMFÎ² controls branched actin content and lamellipodial retraction in fibroblasts. Journal of Cell Biology, 2015, 209, 803-812.	2.3	32
34	Live-Cell Fluorescence Microscopy with Molecular Biosensors: What Are We Really Measuring?. Biophysical Journal, 2012, 102, 2003-2011.	0.2	30
35	Analysis of Reaction-Diffusion Systems with Anomalous Subdiffusion. Biophysical Journal, 2009, 97, 435-442.	0.2	28
36	In Chemotaxing Fibroblasts, Both High-Fidelity and Weakly Biased Cell Movements Track the Localization of PI3K Signaling. Biophysical Journal, 2011, 100, 1893-1901.	0.2	27

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37	Bidirectional coupling between integrin-mediated signaling and actomyosin mechanics explains matrix-dependent intermittency of leading-edge motility. Molecular Biology of the Cell, 2013, 24, 3945-3955.	0.9	27
38	Mathematical Model of Human Growth Hormone (hGH)-Stimulated Cell Proliferation Explains the Efficacy of hGH Variants as Receptor Agonists or Antagonists. Biotechnology Progress, 2004, 20, 1337-1344.	1.3	24
39	Reactions on cell membranes: Comparison of continuum theory and Brownian dynamics simulations. Journal of Chemical Physics, 2005, 123, 074908.	1.2	24
40	Spatial Analysis of 3â€² Phosphoinositide Signaling in Living Fibroblasts, III: Influence of Cell Morphology and Morphological Polarity. Biophysical Journal, 2005, 89, 1420-1430.	0.2	24
41	Spatial Analysis of 3â€² Phosphoinositide Signaling in Living Fibroblasts: I. Uniform Stimulation Model and Bounds on Dimensionless Groups. Biophysical Journal, 2004, 86, 589-598.	0.2	23
42	Quantitative model of Rasâ€"phosphoinositide 3-kinase signalling cross-talk based on co-operative molecular assembly. Biochemical Journal, 2006, 393, 235-243.	1.7	23
43	Data-driven modelling of receptor tyrosine kinase signalling networks quantifies receptor-specific potencies of PI3K- and Ras-dependent ERK activation. Biochemical Journal, 2012, 441, 77-85.	1.7	23
44	Fibroblast Migration Is Regulated by Myristoylated Alanine-Rich C-Kinase Substrate (MARCKS) Protein. PLoS ONE, 2013, 8, e66512.	1.1	23
45	Computational Models of Tandem Src Homology 2 Domain Interactions and Application to Phosphoinositide 3-Kinase. Journal of Biological Chemistry, 2008, 283, 7338-7345.	1.6	18
46	A Bipolar Clamp Mechanism for Activation of Jak-Family Protein Tyrosine Kinases. PLoS Computational Biology, 2009, 5, e1000364.	1.5	17
47	Poly(vinylmethylsiloxane) Elastomer Networks as Functional Materials for Cell Adhesion and Migration Studies. Biomacromolecules, 2011, 12, 1265-1271.	2.6	17
48	On the cross-regulation of protein tyrosine phosphatases and receptor tyrosine kinases in intracellular signaling. Journal of Theoretical Biology, 2004, 230, 119-132.	0.8	16
49	Optical control of MAP kinase kinase 6 (MKK6) reveals that it has divergent roles in pro-apoptotic and anti-proliferative signaling. Journal of Biological Chemistry, 2020, 295, 8494-8504.	1.6	16
50	Systemic Perturbation of the ERK Signaling Pathway by the Proteasome Inhibitor, MG132. PLoS ONE, 2012, 7, e50975.	1.1	15
51	Kinetic Modeling and Analysis of the Akt/Mechanistic Target of Rapamycin Complex 1 (mTORC1) Signaling Axis Reveals Cooperative, Feedforward Regulation. Journal of Biological Chemistry, 2017, 292, 2866-2872.	1.6	14
52	Stochastic Dynamics of Membrane Protrusion Mediated by the DOCK180/Rac Pathway in Migrating Cells. Cellular and Molecular Bioengineering, 2010, 3, 30-39.	1.0	13
53	Linking morphodynamics and directional persistence of T lymphocyte migration. Journal of the Royal Society Interface, 2015, 12, 20141412.	1.5	11
54	Design and evaluation of engineered protein biosensors for live-cell imaging of EGFR phosphorylation. Science Signaling, 2019, 12, .	1.6	11

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55	Membrane-Binding/Modification Model of Signaling Protein Activation and Analysis of Its Control by Cell Morphology. Biophysical Journal, 2007, 92, L93-L95.	0.2	10
56	Development of a tandem affinity phosphoproteomic method with motif selectivity and its application in analysis of signal transduction networks. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2015, 988, 166-174.	1.2	10
57	A Reaction-Diffusion Model Explains Amplification of the PLC/PKC Pathway in Fibroblast Chemotaxis. Biophysical Journal, 2017, 113, 185-194.	0.2	10
58	Effectiveness factor for spatial gradient sensing in living cells. Chemical Engineering Science, 2006, 61, 5603-5611.	1.9	9
59	Signal Transduction at Point-Blank Range: Analysis of a Spatial Coupling Mechanism for Pathway Crosstalk. Biophysical Journal, 2008, 95, 2172-2182.	0.2	9
60	Quantitative analysis of B-lymphocyte migration directed by CXCL13. Integrative Biology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.6	9
61	Cell population-based model of dermal wound invasion with heterogeneous intracellular signaling properties. Cell Adhesion and Migration, 2008, 2, 137-145.	1.1	8
62	Quantitative models of signal transduction networks. Communicative and Integrative Biology, 2011, 4, 353-356.	0.6	6
63	Stochastic Models of Cell Protrusion Arising From Spatiotemporal Signaling and Adhesion Dynamics. Methods in Cell Biology, 2012, 110, 223-241.	0.5	5
64	Quantitative Analysis of Phosphoinositide 3â€Kinase (PI3K) Signaling Using Liveâ€Cell Total Internal Reflection Fluorescence (TIRF) Microscopy. Current Protocols in Cell Biology, 2013, 61, 14.14.1-14.14.24.	2.3	5
65	Are Filopodia Privileged Signaling Structures in Migrating Cells?. Biophysical Journal, 2016, 111, 1827-1830.	0.2	5
66	Mechanistic models of PLC/PKC signaling implicate phosphatidic acid as a key amplifier of chemotactic gradient sensing. PLoS Computational Biology, 2020, 16, e1007708.	1.5	5
67	Modeling cell protrusion predicts how Myosin II and actin turnover affect adhesion-based signaling. Biophysical Journal, 2021, , .	0.2	5
68	Bi-ligand surfaces with oriented and patterned protein for real-time tracking of cell migration. Colloids and Surfaces B: Biointerfaces, 2014, 123, 225-235.	2.5	4
69	Deactivation of a Negative Regulator: A Distinct Signal Transduction Mechanism, Pronounced in Akt Signaling. Biophysical Journal, 2014, 107, L29-L32.	0.2	4
70	A kinetic model of phospholipase C-Î³1 linking structure-based insights to dynamics of enzyme autoinhibition and activation. Journal of Biological Chemistry, 2022, 298, 101886.	1.6	3
71	Cells get in shape for a crawl. Nature, 2008, 453, 461-462.	13.7	1
72	Cell regulation: A time to signal, a time to respond (Comment on DOI 10.1002/bies.201100172). BioEssays, 2012, 34, 528-529.	1.2	1

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73	Microfluidic devices fitted with â€œflowverâ€•paper pumps generate steady, tunable gradients for extended observation of chemotactic cell migration. Biomicrofluidics, 2021, 15, 044101.	1.2	1
74	Combinatorial Signal Transduction Responses Mediated by Interleukin-2 and -4 Receptors in a Helper TH2 Cell Line. Cellular and Molecular Bioengineering, 2008, 1, 163-172.	1.0	0
75	Cells see the light to bring signaling under control. Nature Methods, 2011, 8, 808-809.	9.0	0
76	A Computational Investigation of Asymmetric Emergent Structures in Actomyosin Dynamics During Chemotaxis. Biophysical Journal, 2018, 114, 381a.	0.2	0
77	Emergent spatiotemporal dynamics of the actomyosin network in the presence of chemical gradients. Integrative Biology (United Kingdom), 2019, 11, 280-292.	0.6	0
78	Simulating Emergent Spatiotemporal Actomyosin Dynamics to Understand Spatial Regulation of Non-Muscle Myosin II. Biophysical Journal, 2019, 116, 251a.	0.2	0
79	PI3Kâ€dependent crossâ€talk interactions converge with Ras as quantifiable inputs integrated by Erk. Molecular Systems Biology, 2011, 7, .	3.2	0
80	Title is missing!. , 2020, 16, e1007708.		0
81	Title is missing!. , 2020, 16, e1007708.		0
82	Title is missing!. , 2020, 16, e1007708.		0
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