Peter N Devreotes

List of Publications by Year
in descending order

74	8,898	94269 37	95083 68
papers	citations	h-index	g-index

80	80	80	6372
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electrical signals control wound healing through phosphatidylinositol-3-OH kinase-Î³ and PTEN. Nature, 2006, 442, 457-460.	13.7	880
2	A Cell's Sense of Direction. Science, 1999, 284, 765-770.	6.0	837
3	Tumor Suppressor PTEN Mediates Sensing of Chemoattractant Gradients. Cell, 2002, 109, 599-610.	13.5	638
4	G Protein Signaling Events Are Activated at the Leading Edge of Chemotactic Cells. Cell, 1998, 95, 81-91.	13.5	586
5	Receptor-Mediated Activation of Heterotrimeric G-Proteins in Living Cells. Science, 2001, 291, 2408-2411.	6.0	442
6	Eukaryotic Chemotaxis: A Network of Signaling Pathways Controls Motility, Directional Sensing, and Polarity. Annual Review of Biophysics, 2010, 39, 265-289.	4.5	435
7	Eukaryotic Chemotaxis: Distinctions between Directional Sensing and Polarization. Journal of Biological Chemistry, 2003, 278, 20445-20448.	1.6	396
8	Single-Molecule Analysis of Chemotactic Signaling in Dictyostelium Cells. Science, 2001, 294, 864-867.	6.0	316
9	Localization of the G Protein Complex in Living Cells During Chemotaxis. Science, 2000, 287, 1034-1036.	6.0	282
10	Signaling Networks that Regulate Cell Migration. Cold Spring Harbor Perspectives in Biology, 2015, 7, a005959.	2.3	256
11	Navigating through models of chemotaxis. Current Opinion in Cell Biology, 2008, 20, 35-40.	2.6	249
12	Cells navigate with a local-excitation, global-inhibition-biased excitable network. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17079-17086.	3.3	249
13	Chemoattractant-induced phosphatidylinositol 3,4,5-trisphosphate accumulation is spatially amplified and adapts, independent of the actin cytoskeleton. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8951-8956.	3.3	232
14	G proteinâ€“independent Ras/PI3K/F-actin circuit regulates basic cell motility. Journal of Cell Biology, 2007, 178, 185-191.	2.3	208
15	An excitable signal integrator couples to an idling cytoskeletal oscillator to drive cell migration. Nature Cell Biology, 2013, 15, 1307-1316.	4.6	194
16	Inositol Pyrophosphates Mediate Chemotaxis in Dictyostelium via Pleckstrin Homology Domain-PtdIns(3,4,5)P3 Interactions. Cell, 2003, 114, 559-572.	13.5	188
17	Moving towards a paradigm: common mechanisms of chemotactic signaling in Dictyostelium and mammalian leukocytes. Cellular and Molecular Life Sciences, 2014, 71, 3711-3747.	2.4	180
18	PIP3-Independent Activation of TorC2 and PKB at the Cell's Leading Edge Mediates Chemotaxis. Current Biology, 2008, 18, 1034-1043.	1.8	163

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19	Two Phases of Actin Polymerization Display Different Dependencies on PI(3,4,5)P3 Accumulation and Have Unique Roles during Chemotaxis. Molecular Biology of the Cell, 2003, 14, 5028-5037.	0.9	154
20	Two Complementary, Local Excitation, Global Inhibition Mechanisms Acting in Parallel Can Explain the Chemoattractant-Induced Regulation of PI(3,4,5)P3 Response in Dictyostelium Cells. Biophysical Journal, 2004, 87, 3764-3774.	0.2	144
21	Excitable Signal Transduction Networks in Directed Cell Migration. Annual Review of Cell and Developmental Biology, 2017, 33, 103-125.	4.0	143
22	Altering the threshold of an excitable signal transduction network changes cell migratory modes. Nature Cell Biology, 2017, 19, 329-340.	4.6	121
23	Phenotypic changes induced by a mutated ras gene during the development of Dictyostelium transformants. Nature, 1986, 323, 340-343.	13.7	105
24	Molecular insights into eukaryotic chemotaxis. FASEB Journal, 1991, 5, 3078-3085.	0.2	101
25	Interaction of Motility, Directional Sensing, and Polarity Modules Recreates the Behaviors of Chemotaxing Cells. PLoS Computational Biology, 2013, 9, e1003122.	1.5	94
26	Multiple genes for cell surface cAMP receptors inDictyostelium discoideum. Genesis, 1991, 12, 6-13.	3.1	85
27	Evolutionarily conserved coupling of adaptive and excitable networks mediates eukaryotic chemotaxis. Nature Communications, 2014, 5, 5175.	5.8	78
28	Wave patterns organize cellular protrusions and control cortical dynamics. Molecular Systems Biology, 2019, 15, e8585.	3.2	70
29	An Excitable Ras/PI3K/ERK Signaling Network Controls Migration and Oncogenic Transformation in Epithelial Cells. Developmental Cell, 2020, 54, 608-623.e5.	3.1	62
30	Genetic analysis of the role of G proteinâ€“coupled receptor signaling in electrotaxis. Journal of Cell Biology, 2002, 157, 921-928.	2.3	60
31	Coordination of Receptor Tyrosine Kinase Signaling and Interfacial Tension Dynamics Drives Radial Intercalation and Tube Elongation. Developmental Cell, 2018, 45, 67-82.e6.	3.1	59
32	cAMP receptor affinity controls wave dynamics, geometry and morphogenesis inDictyostelium. Journal of Cell Science, 2001, 114, 2513-2523.	1.2	59
33	NKCC1 Regulates Migration Ability of Glioblastoma Cells by Modulation of Actin Dynamics and Interacting with Cofilin. EBioMedicine, 2017, 21, 94-103.	2.7	58
34	The Directional Response of Chemotactic Cells Depends on a Balance between Cytoskeletal Architecture and the External Gradient. Cell Reports, 2014, 9, 1110-1121.	2.9	57
35	Chemical and mechanical stimuli act on common signal transduction and cytoskeletal networks. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E7500-E7509.	3.3	55
36	A Unified Nomenclature and Amino Acid Numbering for Human PTEN. Science Signaling, 2014, 7, pe15.	1.6	50

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37	Mutually inhibitory Ras-PI(3,4)P ₂ feedback loops mediate cell migration. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9125-E9134.	3.3	50
38	Tortoise, a Novel Mitochondrial Protein, Is Required for Directional Responses of Dictyostelium in Chemotactic Gradients. Journal of Cell Biology, 2001, 152, 621-632.	2.3	44
39	A large-scale screen reveals genes that mediate electrotaxis in Dictyostelium discoideum. Science Signaling, 2015, 8, ra50.	1.6	39
40	The excitable signal transduction networks: movers and shapers of eukaryotic cell migration. International Journal of Developmental Biology, 2019, 63, 407-416.	0.3	39
41	Statin-induced GGPP depletion blocks macropinocytosis and starves cells with oncogenic defects. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 4158-4168.	3.3	39
42	Agonist-induced Loss of Ligand Binding Is Correlated with Phosphorylation of cAR1, a G Protein-coupled Chemoattractant Receptor from Dictyostelium. Journal of Biological Chemistry, 1995, 270, 8667-8672.	1.6	38
43	Dictyostelium RacH Regulates Endocytic Vesicular Trafficking and is Required for Localization of Vacuolin. Traffic, 2006, 7, 1194-1212.	1.3	33
44	Excitable networks controlling cell migration during development and disease. Seminars in Cell and Developmental Biology, 2020, 100, 133-142.	2.3	33
45	Occupancy of the Dictyostelium cAMP Receptor, cAR1, Induces a Reduction in Affinity Which Depends upon COOH-terminal Serine Residues. Journal of Biological Chemistry, 1995, 270, 4418-4423.	1.6	28
46	Gî² Regulates Coupling between Actin Oscillators for Cell Polarity and Directional Migration. PLoS Biology, 2016, 14, e1002381.	2.6	28
47	Traveling and standing waves mediate pattern formation in cellular protrusions. Science Advances, 2020, 6, eaay7682.	4.7	24
48	A minimal computational model for three-dimensional cell migration. Journal of the Royal Society Interface, 2019, 16, 20190619.	1.5	23
49	The GATA transcription factor GtaC regulates early developmental gene expression dynamics in Dictyostelium. Nature Communications, 2015, 6, 7551.	5.8	20
50	Shear force-based genetic screen reveals negative regulators of cell adhesion and protrusive activity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7727-E7736.	3.3	19
51	Opening the conformation is a master switch for the dual localization and phosphatase activity of PTEN. Scientific Reports, 2015, 5, 12600.	1.6	18
52	Structure and expression of the cAMP cell-surface receptor. Genesis, 1988, 9, 227-235.	3.1	16
53	Insight from the maximal activation of the signal transduction excitable network in Dictyostelium discoideum. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3722-E3730.	3.3	16
54	Chemoattractant receptors activate, recruit and capture G proteins for wide range chemotaxis. Biochemical and Biophysical Research Communications, 2018, 507, 304-310.	1.0	14

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55	Novel protein Callipygian defines the back of migrating cells. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3845-54.	3.3	13
56	Cell migration directionality and speed are independently regulated by RasG and GÎ² inDictyosteliumcells in electrotaxis. Biology Open, 2019, 8, .	0.6	11
57	Coupling traction force patterns and actomyosin wave dynamics reveals mechanics of cell motion. Molecular Systems Biology, 2021, 17, e10505.	3.2	10
58	Engineering PTEN function: Membrane association and activity. Methods, 2015, 77-78, 119-124.	1.9	9
59	Using Live-Cell Imaging and Synthetic Biology to Probe Directed Migration in Dictyostelium. Frontiers in Cell and Developmental Biology, 2021, 9, 740205.	1.8	9
60	Cortical waves mediate the cellular response to electric fields. ELife, 2022, 11, .	2.8	9
61	Reverse fountain flow of phosphatidylinositolâ€3,4â€bisphosphate polarizes migrating cells. EMBO Journal, 2021, 40, e105094.	3.5	7
62	Hedgehog signaling and Tre1 regulate actin dynamics through PI(4,5)P2 to direct migration of Drosophila embryonic germ cells. Cell Reports, 2021, 34, 108799.	2.9	7
63	Three-dimensional stochastic simulation of chemoattractant-mediated excitability in cells. PLoS Computational Biology, 2021, 17, e1008803.	1.5	7
64	Electric signals counterbalanced posterior vs anterior PTEN signaling in directed migration of Dictyostelium. Cell and Bioscience, 2021, 11, 111.	2.1	2
65	Cell-Cell Interactions in the Development ofDictyostelium. American Zoologist, 1986, 26, 549-552.	0.7	1
66	3D arrays for high throughput assay of cell migration and electrotaxis. Cell Biology International, 2014, 38, 987-987.	1.4	1
67	Assessment of Dictyostelium discoideum Response to Acute Mechanical Stimulation. Journal of Visualized Experiments, 2017, , .	0.2	1
68	Moving toward molecular mechanisms for chemotaxis in eukaryotic cells. Molecular Biology of the Cell, 2019, 30, 2873-2877.	0.9	1
69	Mechanisms of Eukaryotic Chemotaxis. , 2005, , 33-45.		0
70	2P201 Dynamic regulation of PI(3,4,5)P_3 phosphatase activity of PTEN on membranes revealed by single-molecule imaging(Cell biological problems-adhesion, motility, cytoskeleton, signaling, and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 1		
71	Gâ€protein signaling and adaptation in chemotaxis. FASEB Journal, 2011, 25, .	0.2	0
72	KrsB: A Novel Regulator of D. discoideum Development, Adhesion and Chemotaxis. FASEB Journal, 2011, 25, 930.2.	0.2	0

#	Article	IF	Citations
73	Identification of a novel protein at the lagging edge of migrating cells. FASEB Journal, 2011, 25, 930.13.	0.2	0
74	Pitavastatin Selectively Kills PTEN Knock Out Cells and Cancer Organoids in Mouse Model via the Mevalonate Pathway. FASEB Journal, 2019, 33, 782.14.	0.2	0