Michael Levin

List of Publications by Year
in descending order

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Version: 2024-02-01

384 papers	19,918 citations	10373 72 h-index	18633 119 g-index
429 all docs	429 docs citations	429 times ranked	10064 citing authors

#	ARTICLE	IF	CITATIONS
1	Endless forms most beautiful 2.0: teleonomy and the bioengineering of chimaeric and synthetic organisms. Biological Journal of the Linnean Society, 2023, 139, 457-486.	0.7	28
2	Potassium channel-driven bioelectric signalling regulates metastasis in triple-negative breast cancer. EBioMedicine, 2022, 75, 103767.	2.7	26
3	Multi-scale Chimerism: An experimental window on the algorithms of anatomical control. Cells and Development, 2022, 169, 203764.	0.7	8
4	Minimal Developmental Computation: A Causal Network Approach to Understand Morphogenetic Pattern Formation. Entropy, 2022, 24, 107.	1.1	13
5	Acute multidrug delivery via a wearable bioreactor facilitates long-term limb regeneration and functional recovery in adult <i>Xenopus laevis</i>. Science Advances, 2022, 8, eabj2164.	4.7	27
6	Studying Protista WBR and Repair Using Physarum polycephalum. Methods in Molecular Biology, 2022, 2450, 51-67.	0.4	0
7	Impact of Membrane Voltage on Formation and Stability of Human Renal Proximal Tubules <i>in Vitro</i>. ACS Biomaterials Science and Engineering, 2022, 8, 1239-1246.	2.6	0
8	Design for an Individual: Connectionist Approaches to the Evolutionary Transitions in Individuality. Frontiers in Ecology and Evolution, 2022, 10, .	1.1	13
9	A Computational Approach to Explaining Bioelectrically Induced Persistent, Stochastic Changes of Axial Polarity in Planarian Regeneration. Bioelectricity, 2022, 4, 18-30.	0.6	0
10	Technological Approach to Mind Everywhere: An Experimentally-Grounded Framework for Understanding Diverse Bodies and Minds. Frontiers in Systems Neuroscience, 2022, 16, 768201.	1.2	44
11	Bioelectricity: From Endogenous Mechanisms to Opportunities in Synthetic Bioengineering. Bioelectricity, 2022, 4, 1-2.	0.6	1
12	Ion Channel Drugs Suppress Cancer Phenotype in NG108-15 and U87 Cells: Toward Novel Electroceuticals for Glioblastoma. Cancers, 2022, 14, 1499.	1.7	12
13	Biological underpinnings for lifelong learning machines. Nature Machine Intelligence, 2022, 4, 196-210.	8.3	62
14	Metacognition as a Consequence of Competing Evolutionary Time Scales. Entropy, 2022, 24, 601.	1.1	11
15	Biology, Buddhism, and AI: Care as the Driver of Intelligence. Entropy, 2022, 24, 710.	1.1	4
16	A free energy principle for generic quantum systems. Progress in Biophysics and Molecular Biology, 2022, 173, 36-59.	1.4	29
17	Neurons as hierarchies of quantum reference frames. BioSystems, 2022, 219, 104714.	0.9	12
18	HCN2 channelâ€induced rescue of brain, eye, heart and gut teratogenesis caused by nicotine, ethanol and aberrant notch signalling. Wound Repair and Regeneration, 2022, 30, 681-706.	1.5	11

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19	Enhancers of Host Immune Tolerance to Bacterial Infection Discovered Using Linked Computational and Experimental Approaches. Advanced Science, 2022, 9, .	5.6	3
20	Competency in Navigating Arbitrary Spaces as an Invariant for Analyzing Cognition in Diverse Embodiments. Entropy, 2022, 24, 819.	1.1	37
21	Life, death, and self: Fundamental questions of primitive cognition viewed through the lens of body plasticity and synthetic organisms. Biochemical and Biophysical Research Communications, 2021, 564, 114-133.	1.0	42
22	A Meta-Analysis of Bioelectric Data in Cancer, Embryogenesis, and Regeneration. Bioelectricity, 2021, 3, 42-67.	0.6	25
23	Epigenetic control of myeloid cells behavior by Histone Deacetylase activity (HDAC) during tissue and organ regeneration in Xenopus laevis. Developmental and Comparative Immunology, 2021, 114, 103840.	1.0	3
24	Shape Changing Robots: Bioinspiration, Simulation, and Physical Realization. Advanced Materials, 2021, 33, e2002882.	11.1	66
25	Reframing cognition: getting down to biological basics. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20190750.	1.8	85
26	Self-Organising Textures. Distill, 2021, 6, .	5.3	12
27	Bistability of somatic pattern memories: stochastic outcomes in bioelectric circuits underlying regeneration. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20190765.	1.8	24
28	Uncovering cognitive similarities and differences, conservation and innovation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20200458.	1.8	29
29	Unlimited plasticity of embodied, cognitive subjects: a new playground for the UAL framework. Biology and Philosophy, 2021, 36, 1.	0.7	1
30	Living Things Are Not (20th Century) Machines: Updating Mechanism Metaphors in Light of the Modern Science of Machine Behavior. Frontiers in Ecology and Evolution, 2021, 9, .	1.1	39
31	A cellular platform for the development of synthetic living machines. Science Robotics, 2021, 6, .	9.9	86
32	Gene regulatory networks exhibit several kinds of memory: Quantification of memory in biological and random transcriptional networks. IScience, 2021, 24, 102131.	1.9	31
33	Editorial. Bioelectricity, 2021, 3, 2-2.	0.6	0
34	Editorial: Interplay Between Ion Channels, the Nervous System, and Embryonic Development. Frontiers in Molecular Neuroscience, 2021, 14, 618815.	1.4	1
35	Learning and synaptic plasticity in 3D bioengineered neural tissues. Neuroscience Letters, 2021, 750, 135799.	1.0	2
36	Bioelectric signaling: Reprogrammable circuits underlying embryogenesis, regeneration, and cancer. Cell, 2021, 184, 1971-1989.	13.5	157

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37	Synthetic living machines: A new window on life. IScience, 2021, 24, 102505.	1.9	35
38	Bioelectrical approaches to cancer as a problem of the scaling of the cellular self. Progress in Biophysics and Molecular Biology, 2021, 165, 102-113.	1.4	35
39	Adversarial Reprogramming of Neural Cellular Automata. Distill, 2021, 6, .	5.3	2
40	Shapeâ€Changing Robots: Shape Changing Robots: Bioinspiration, Simulation, and Physical Realization (Adv. Mater. 19/2021). Advanced Materials, 2021, 33, 2170150.	11.1	2
41	Minimal physicalism as a scale-free substrate for cognition and consciousness. Neuroscience of Consciousness, 2021, 2021, niab013.	1.4	24
42	Unmixing octopus camouflage by multispectral mapping of Octopus bimaculoidesâ€™ chromatic elements. Nanophotonics, 2021, 10, 2441-2450.	2.9	4
43	Mechanosensation Mediates Longâ€Range Spatial Decisionâ€Making in an Aneural Organism. Advanced Materials, 2021, 33, e2008161.	11.1	11
44	Inducing Vertebrate Limb Regeneration: A Review of Past Advances and Future Outlook. Cold Spring Harbor Perspectives in Biology, 2021, , a040782.	2.3	4
45	A Comprehensive Conceptual and Computational Dynamics Framework for Autonomous Regeneration Systems. Artificial Life, 2021, 27, 80-104.	1.0	4
46	Bioelectricity Is the Bridge Where Cancer Meets Neuroscience. Bioelectricity, 2021, 3, 159-160.	0.6	0
47	Beyond Neurons: Long Distance Communication in Development and Cancer. Frontiers in Cell and Developmental Biology, 2021, 9, 739024.	1.8	16
48	Stability and robustness properties of bioelectric networks: A computational approach. Biophysics Reviews, 2021, 2, .	1.0	2
49	Metabolic limits on classical information processing by biological cells. BioSystems, 2021, 209, 104513.	0.9	13
50	Morphology changes induced by intercellular gap junction blocking: A reaction-diffusion mechanism. BioSystems, 2021, 209, 104511.	0.9	10
51	Cell Systems Bioelectricity: How Different Intercellular Gap Junctions Could Regionalize a Multicellular Aggregate. Cancers, 2021, 13, 5300.	1.7	13
52	Rewiring Endogenous Bioelectric Circuits in the Xenopus laevis Embryo Model. Methods in Molecular Biology, 2021, 2258, 93-103.	0.4	2
53	Kinematic self-replication in reconfigurable organisms. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	57
54	Behaviorist approaches to investigating memory and learning: A primer for synthetic biology and bioengineering. Communicative and Integrative Biology, 2021, 14, 230-247.	0.6	16

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55	Defined extracellular ionic solutions to study and manipulate the cellular resting membrane potential. Biology Open, 2020, 9, .	0.6	12
56	Morphogenesis as Bayesian inference: A variational approach to pattern formation and control in complex biological systems. Physics of Life Reviews, 2020, 33, 88-108.	1.5	73
57	Toward Decoding Bioelectric Events in Xenopus Embryogenesis: New Methodology for Tracking Interplay Between Calcium and Resting Potentials In Vivo. Journal of Molecular Biology, 2020, 432, 605-620.	2.0	14
58	A scalable pipeline for designing reconfigurable organisms. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 1853-1859.	3.3	255
59	Assessment of Enrichment of Human Mesenchymal Stem Cells Based on Plasma and Mitochondrial Membrane Potentials. Bioelectricity, 2020, 2, 21-32.	0.6	4
60	Bioelectrical model of head-tail patterning based on cell ion channels and intercellular gap junctions. Bioelectrochemistry, 2020, 132, 107410.	2.4	15
61	Post-SSRI Sexual Dysfunction: A Bioelectric Mechanism?. Bioelectricity, 2020, 2, 7-13.	0.6	3
62	Morphological Coordination: A Common Ancestral Function Unifying Neural and Non-Neural Signaling. Physiology, 2020, 35, 16-30.	1.6	58
63	Nervous system and tissue polarity dynamically adapt to new morphologies in planaria. Developmental Biology, 2020, 467, 51-65.	0.9	9
64	Integrating variational approaches to pattern formation into a deeper physics. Physics of Life Reviews, 2020, 33, 125-128.	1.5	3
65	Precise control of ion channel and gap junction expression is required for patterning of the regenerating axolotl limb. International Journal of Developmental Biology, 2020, 64, 485-494.	0.3	7
66	How Do Living Systems Create Meaning?. Philosophies, 2020, 5, 36.	0.4	20
67	Emergence of informative higher scales in biological systems: a computational toolkit for optimal prediction and control. Communicative and Integrative Biology, 2020, 13, 108-118.	0.6	15
68	Applications and ethics of computer-designed organisms. Nature Reviews Molecular Cell Biology, 2020, 21, 655-656.	16.1	16
69	Why isnâ€™t sex optional? Stem-cell competition, loss of regenerative capacity, and cancer in metazoan evolution. Communicative and Integrative Biology, 2020, 13, 170-183.	0.6	8
70	Inaugural Issue. Bioelectricity, 2020, 2, 1-1.	0.6	0
71	Machine Learningâ€Driven Bioelectronics for Closedâ€Loop Control of Cells. Advanced Intelligent Systems, 2020, 2, 2000140.	3.3	29
72	A 3D Tissue Model of Traumatic Brain Injury with Excitotoxicity That Is Inhibited by Chronic Exposure to Gabapentinoids. Biomolecules, 2020, 10, 1196.	1.8	7

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73	Cover Image: Volume 22, Issue 4. Evolution & Development, 2020, 22, i.	1.1	0
74	Bioelectronic control of chloride ions and concentration with Ag/AgCl contacts. APL Materials, 2020, 8, .	2.2	18
75	Bioelectricity: A Quick Reminder of a Fast-Advancing Discipline!. Bioelectricity, 2020, 2, 208-209.	0.6	2
76	Scaleâ€Free Biology: Integrating Evolutionary and Developmental Thinking. BioEssays, 2020, 42, e1900228.	1.2	31
77	Richard Borgens, 1946â€"2019. Bioelectricity, 2020, 2, 205-205.	0.6	0
78	On the coupling of mechanics with bioelectricity and its role in morphogenesis. Journal of the Royal Society Interface, 2020, 17, 20200177.	1.5	14
79	Revisiting Burr and Northropâ€™s â€œThe Electro-Dynamic Theory of Lifeâ€•(1935). Biological Theory, 2020, 15, 83-90.	0.8	7
80	Interferon-Gamma Stimulated Murine Macrophages In Vitro: Impact of Ionic Composition and Osmolarity and Therapeutic Implications. Bioelectricity, 2020, 2, 48-58.	0.6	6
81	Sertraline induces DNA damage and cellular toxicity in Drosophila that can be ameliorated by antioxidants. Scientific Reports, 2020, 10, 4512.	1.6	7
82	von Willebrand factor D and EGF domains is an evolutionarily conserved and required feature of blastemas capable of multitissue appendage regeneration. Evolution & Development, 2020, 22, 297-311.	1.1	25
83	Competitive and Coordinative Interactions between Body Parts Produce Adaptive Developmental Outcomes. BioEssays, 2020, 42, e1900245.	1.2	20
84	Scalable sim-to-real transfer of soft robot designs. , 2020, , .		40
85	Does regeneration recapitulate phylogeny? Planaria as a model of body-axis specification in ancestral eumetazoa. Communicative and Integrative Biology, 2020, 13, 27-38.	0.6	7
86	The Biophysics of Regenerative Repair Suggests New Perspectives on Biological Causation. BioEssays, 2020, 42, e1900146.	1.2	27
87	Extra-genomic instructive influences in morphogenesis: A review of external signals that regulate growth and form. Developmental Biology, 2020, 461, 1-12.	0.9	11
88	Optogenetically induced cellular habituation in non-neuronal cells. PLoS ONE, 2020, 15, e0227230.	1.1	6
89	Formin, an opinion. Development (Cambridge), 2020, 147, .	1.2	5
90	An in vivo brainâ€"bacteria interface: the developing brain as a key regulator of innate immunity. Npj Regenerative Medicine, 2020, 5, 2.	2.5	7

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91	Bioelectrical Coupling of Single-Cell States in Multicellular Systems. Journal of Physical Chemistry Letters, 2020, 11, 3234-3241.	2.1	28
92	Regulation of axial and head patterning during planarian regeneration by a commensal bacterium. Mechanisms of Development, 2020, 163, 103614.	1.7	20
93	Community effects allow bioelectrical reprogramming of cell membrane potentials in multicellular aggregates: Model simulations. Physical Review E, 2020, 102, 052412.	0.8	10
94	Growing Neural Cellular Automata. Distill, 2020, 5, .	5.3	56
95	HCN2 Channel-Induced Rescue of Brain Teratogenesis via Local and Long-Range Bioelectric Repair. Frontiers in Cellular Neuroscience, 2020, 14, 136.	1.8	32
96	Eya2 promotes cell cycle progression by regulating DNA damage response during vertebrate limb regeneration. ELife, 2020, 9, .	2.8	23
97	Self-classifying MNIST Digits. Distill, 2020, 5, .	5.3	13
98	Machine Learningâ€Driven Bioelectronics for Closedâ€Loop Control of Cells. Advanced Intelligent Systems, 2020, 2, 2070122.	3.3	3
99	Optogenetically induced cellular habituation in non-neuronal cells. , 2020, 15, e0227230.		0
100	Optogenetically induced cellular habituation in non-neuronal cells. , 2020, 15, e0227230.		0
101	Optogenetically induced cellular habituation in non-neuronal cells. , 2020, 15, e0227230.		0
102	Optogenetically induced cellular habituation in non-neuronal cells. , 2020, 15, e0227230.		0
103	Reverse-engineering growth and form in Heidelberg. Development (Cambridge), 2019, 146, .	1.2	5
104	From non-excitable single-cell to multicellular bioelectrical states supported by ion channels and gap junction proteins: Electrical potentials as distributed controllers. Progress in Biophysics and Molecular Biology, 2019, 149, 39-53.	1.4	30
105	L-type voltage-gated Ca ²⁺ channel Ca _V 1.2 regulates chondrogenesis during limb development. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21592-21601.	3.3	41
106	Managing Ideas, People, and Projects: Organizational Tools and Strategies for Researchers. IScience, 2019, 20, 278-291.	1.9	2
107	Hyperosmolar Potassium Inhibits Myofibroblast Conversion and Reduces Scar Tissue Formation. ACS Biomaterials Science and Engineering, 2019, 5, 5327-5336.	2.6	8
108	Editor's Picks for the Cancer Special Issue. Bioelectricity, 2019, 1, 201-202.	0.6	0

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109	A flow through device for simultaneous dielectrophoretic cell trapping and AC electroporation. Scientific Reports, 2019, 9, 11988.	1.6	46
110	Bioelectrical controls of morphogenesis: from ancient mechanisms of cell coordination to biomedical opportunities. Current Opinion in Genetics and Development, 2019, 57, 61-69.	1.5	38
111	Somatic multicellularity as a satisficing solution to the prediction-error minimization problem. Communicative and Integrative Biology, 2019, 12, 119-132.	0.6	12
112	Bioelectric Control of Metastasis in Solid Tumors. Bioelectricity, 2019, 1, 114-130.	0.6	47
113	EDEnâ€"Electroceutical Design Environment: Ion Channel Tissue Expression Database with Small Molecule Modulators. IScience, 2019, 11, 42-56.	1.9	24
114	On the Generalization of Habituation: How Discrete Biological Systems Respond to Repetitive Stimuli. BioEssays, 2019, 41, e1900028.	1.2	7
115	Live imaging of intracellular pH in planarians using the ratiometric fluorescent dye SNARF-5F-AM. Biology Methods and Protocols, 2019, 4, bpz005.	1.0	1
116	Synchronization of Bioelectric Oscillations in Networks of Nonexcitable Cells: From Single-Cell to Multicellular States. Journal of Physical Chemistry B, 2019, 123, 3924-3934.	1.2	25
117	The Cognitive Lens: a primer on conceptual tools for analysing information processing in developmental and regenerative morphogenesis. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180369.	1.8	44
118	Neural control of body-plan axis in regenerating planaria. PLoS Computational Biology, 2019, 15, e1006904.	1.5	36
119	Membrane Potential Depolarization Alters Calcium Flux and Phosphate Signaling During Osteogenic Differentiation of Human Mesenchymal Stem Cells. Bioelectricity, 2019, 1, 56-66.	0.6	32
120	A call for a better understanding of causation in cell biology. Nature Reviews Molecular Cell Biology, 2019, 20, 261-262.	16.1	41
121	The Role of Early Bioelectric Signals in the Regeneration of Planarian Anterior/Posterior Polarity. Biophysical Journal, 2019, 116, 948-961.	0.2	70
122	The Computational Boundary of a â€œSelfâ€: Developmental Bioelectricity Drives Multicellularity and Scale-Free Cognition. Frontiers in Psychology, 2019, 10, 2688.	1.1	114
123	Regenerative Adaptation to Electrochemical Perturbation in Planaria: A Molecular Analysis of Physiological Plasticity. IScience, 2019, 22, 147-165.	1.9	19
124	Endogenous Bioelectrics in Development, Cancer, and Regeneration: Drugs and Bioelectronic Devices as Electroceuticals for Regenerative Medicine. IScience, 2019, 22, 519-533.	1.9	40
125	Modeling somatic computation with non-neural bioelectric networks. Scientific Reports, 2019, 9, 18612.	1.6	28
126	Selective Serotonin Reuptake Inhibitor Use During Pregnancy and Major Malformations: The Importance of Serotonin for Embryonic Development and the Effect of Serotonin Inhibition on the Occurrence of Malformations. Bioelectricity, 2019, 1, 18-29.	0.6	8

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127	The Bioelectricity Revolution: A Discussion Among the Founding Associate Editors. Bioelectricity, 2019, 1, 8-15.	0.6	1
128	Effects of Ivermectin Exposure on Regeneration of <i>D. dorotocephala</i> Planaria: Exploiting Humanâ€Approved Ion Channel Drugs as Morphoceuticals. Macromolecular Bioscience, 2019, 19, e1800237.	2.1	6
129	Planarian regeneration as a model of anatomical homeostasis: Recent progress in biophysical and computational approaches. Seminars in Cell and Developmental Biology, 2019, 87, 125-144.	2.3	47
130	Toward Modeling Regeneration via Adaptable Echo State Networks. , 2019, , 117-134.		0
131	HCN2 Rescues brain defects by enforcing endogenous voltage pre-patterns. Nature Communications, 2018, 9, 998.	5.8	63
132	The body electric 2.0: recent advances in developmental bioelectricity for regenerative and synthetic bioengineering. Current Opinion in Biotechnology, 2018, 52, 134-144.	3.3	81
133	Niclosamide rescues microcephaly in a humanized <i>in vivo</i> model of Zika infection using human induced neural stem cells. Biology Open, 2018, 7, .	0.6	30
134	Bioelectrical control of positional information in development and regeneration: A review of conceptual and computational advances. Progress in Biophysics and Molecular Biology, 2018, 137, 52-68.	1.4	35
135	Inverse Drug Screening of Bioelectric Signaling and Neurotransmitter Roles: Illustrated Using a<i>Xenopus</i>Tail Regeneration Assay. Cold Spring Harbor Protocols, 2018, 2018, pdb.prot099937.	0.2	9
136	Bioelectric signaling in regeneration: Mechanisms of ionic controls of growth and form. Developmental Biology, 2018, 433, 177-189.	0.9	163
137	Slime mould: The fundamental mechanisms of biological cognition. BioSystems, 2018, 165, 57-70.	0.9	67
138	Bioelectrical coupling in multicellular domains regulated by gap junctions: A conceptual approach. Bioelectrochemistry, 2018, 123, 45-61.	2.4	59
139	Booting up the organism during development: Pre-behavioral functions of the vertebrate brain in guiding body morphogenesis. Communicative and Integrative Biology, 2018, 11, e1433440.	0.6	14
140	Are Planaria Individuals? What Regenerative Biology is Telling Us About the Nature of Multicellularity. Evolutionary Biology, 2018, 45, 237-247.	0.5	38
141	The bioelectric code: An ancient computational medium for dynamic control of growth and form. BioSystems, 2018, 164, 76-93.	0.9	139
142	Embodying Markov blankets. Physics of Life Reviews, 2018, 24, 32-36.	1.5	6
143	Multiscale memory and bioelectric error correction in the cytoplasmâ€"cytoskeletonâ€membrane system. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2018, 10, e1410.	6.6	32
144	Cover Image, Volume 10, Issue 2. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2018, 10, e1420.	6.6	0

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145	Avian models and the study of invariant asymmetry: how the chicken and the egg taught us to tell right from left. International Journal of Developmental Biology, 2018, 62, 63-77.	0.3	17
146	Brief Local Application of Progesterone via a Wearable Bioreactor Induces Long-Term Regenerative Response in Adult Xenopus Hindlimb. Cell Reports, 2018, 25, 1593-1609.e7.	2.9	33
147	A Computational Framework for Autonomous Self-repair Systems. Lecture Notes in Computer Science, 2018, , 153-159.	1.0	5
148	The Bacterial Metabolite Indole Inhibits Regeneration of the Planarian Flatworm Dugesia japonica. IScience, 2018, 10, 135-148.	1.9	17
149	Ivermectin Promotes Peripheral Nerve Regeneration during Wound Healing. ACS Omega, 2018, 3, 12392-12402.	1.6	11
150	Perspective: The promise of multi-cellular engineered living systems. APL Bioengineering, 2018, 2, 040901.	3.3	110
151	Activating PAX gene family paralogs to complement PAX5 leukemia driver mutations. PLoS Genetics, 2018, 14, e1007642.	1.5	3
152	Inform: Efficient Information-Theoretic Analysis of Collective Behaviors. Frontiers in Robotics and AI, 2018, 5, 60.	2.0	33
153	Pattern Regeneration in Coupled Networks. , 2018, , .		1
154	Modeling Cell Migration in a Simulated Bioelectrical Signaling Network for Anatomical Regeneration. , 2018, , .		4
155	From Physics to Pattern: Uncovering Pattern Formation in Tissue Electrophysiology. , 2018, , .		6
156	Cross-limb communication during <i>Xenopus</i> hind-limb regenerative response: non-local bioelectric injury signals. Development (Cambridge), 2018, 145, .	1.2	30
157	A computational model of planarian regeneration. International Journal of Parallel, Emergent and Distributed Systems, 2017, 32, 331-347.	0.7	11
158	Gap junctional signaling in pattern regulation: Physiological network connectivity instructs growth and form. Developmental Neurobiology, 2017, 77, 643-673.	1.5	67
159	Reversals of Bodies, Brains, and Behavior. Neuromethods, 2017, , 667-694.	0.2	1
160	Discovering novel phenotypes with automatically inferred dynamic models: a partial melanocyte conversion in Xenopus. Scientific Reports, 2017, 7, 41339.	1.6	26
161	Repeated removal of developing limb buds permanently reduces appendage size in the highly-regenerative axolotl. Developmental Biology, 2017, 424, 1-9.	0.9	31
162	Endogenous Bioelectric Signaling Networks: Exploiting Voltage Gradients for Control of Growth and Form. Annual Review of Biomedical Engineering, 2017, 19, 353-387.	5.7	182

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163	Planarian regeneration in space: Persistent anatomical, behavioral, and bacteriological changes induced by space travel. Regeneration (Oxford, England), 2017, 4, 85-102.	6.3	23
164	Long-Term, Stochastic Editing of Regenerative Anatomy via Targeting Endogenous Bioelectric Gradients. Biophysical Journal, 2017, 112, 2231-2243.	0.2	101
165	Bioelectric regulation of innate immune system function in regenerating and intact Xenopus laevis. Npj Regenerative Medicine, 2017, 2, 15.	2.5	19
166	Coordinating heart morphogenesis: A novel role for hyperpolarization-activated cyclic nucleotide-gated (HCN) channels during cardiogenesis in<i>Xenopus laevis</i>. Communicative and Integrative Biology, 2017, 10, e1309488.	0.6	29
167	Serotonergic stimulation induces nerve growth and promotes visual learning via posterior eye grafts in a vertebrate model of induced sensory plasticity. Npj Regenerative Medicine, 2017, 2, 8.	2.5	28
168	Modeling regenerative processes with membrane computing. Information Sciences, 2017, 381, 229-249.	4.0	35
169	Bioelectric gene and reaction networks: computational modelling of genetic, biochemical and bioelectrical dynamics in pattern regulation. Journal of the Royal Society Interface, 2017, 14, 20170425.	1.5	71
170	HCN4 ion channel function is required for early events that regulate anatomical left-right patterning in a Nodal- and Lefty asymmetric gene expression-independent manner. Biology Open, 2017, 6, 1445-1457.	0.6	22
171	Cancer as a disorder of patterning information: computational and biophysical perspectives on the cancer problem. Convergent Science Physical Oncology, 2017, 3, 043001.	2.6	35
172	The brain is required for normal muscle and nerve patterning during early Xenopus development. Nature Communications, 2017, 8, 587.	5.8	40
173	The Zahn drawings: new illustrations of <i>Xenopus</i> embryo and tadpole stages for studies of craniofacial development. Development (Cambridge), 2017, 144, 2708-2713.	1.2	15
174	Computing a Worm: Reverse-Engineering Planarian Regeneration. Emergence, Complexity and Computation, 2017, , 637-654.	0.2	9
175	Space travel has effects on planarian regeneration that cannot be explained by a null hypothesis. Regeneration (Oxford, England), 2017, 4, 156-158.	6.3	2
176	Introducing simulated stem cells into a bio-inspired cell-cell communication mechanism for structure regeneration. , 2017, , .		4
177	Inform: A toolkit for information-theoretic analysis of complex systems. , 2017, , .		6
178	Ion Channel and Neurotransmitter Modulators as Electroceutical Approaches to the Control of Cancer. Current Pharmaceutical Design, 2017, 23, 4827-4841.	0.9	32
179	Bioelectrical coordination of cell activity toward anatomical target states. , 2017, , 55-112.		2
180	IK channel activation increases tumor growth and induces differential behavioral responses in two breast epithelial cell lines. Oncotarget, 2017, 8, 42382-42397.	0.8	9

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181	Microfluidic platform to study intercellular connectivity through on-chip electrical impedance measurement. , 2017, , .		2
182	Investigating the effects of noise on a cell-to-cell communication mechanism for structure regeneration. , 2017, , .		1
183	Exploring Instructive Physiological Signaling with the Bioelectric Tissue Simulation Engine. Frontiers in Bioengineering and Biotechnology, 2016, 4, 55.	2.0	68
184	On Having No Head: Cognition throughout Biological Systems. Frontiers in Psychology, 2016, 7, 902.	1.1	209
185	Bioelectric modulation of macrophage polarization. Scientific Reports, 2016, 6, 21044.	1.6	72
186	Comparison of the depolarization response of human mesenchymal stem cells from different donors. Scientific Reports, 2016, 5, 18279.	1.6	27
187	Introduction to provocative questions in leftâ€"right asymmetry. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150399.	1.8	21
188	Telocytes in their context with other intercellular communication agents. Seminars in Cell and Developmental Biology, 2016, 55, 9-13.	2.3	26
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