

Detlev Arendt

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

107
papers

8,030
citations

47
h-index

89
g-index

123
ext. papers

9,714
ext. citations

12.7
avg, IF

6.38
L-index

#	Paper	IF	Citations
107	Molecular biology for green recovery-A call for action.. <i>PLoS Biology</i> , 2022 , 20, e3001623	9.7	0
106	Profiling cellular diversity in sponges informs animal cell type and nervous system evolution. <i>Science</i> , 2021 , 374, 717-723	33.3	15
105	Single cell RNA sequencing of the larva reveals the blueprint of major cell types and nervous system of a non-chordate deuterostome. <i>ELife</i> , 2021 , 10,	8.9	3
104	The conserved core of the nereid brain: Circular CNS, apical nervous system and lhx6-arx-dlx neurons. <i>Current Opinion in Neurobiology</i> , 2021 , 71, 178-187	7.6	0
103	The dorsoanterior brain of adult amphioxus shares similarities in expression profile and neuronal composition with the vertebrate telencephalon. <i>BMC Biology</i> , 2021 , 19, 110	7.3	6
102	Mapping single-cell atlases throughout Metazoa unravels cell type evolution. <i>ELife</i> , 2021 , 10,	8.9	20
101	MoBIE: A free and open-source platform for integration and cloud-based sharing of multi-modal correlative big image data. <i>Microscopy and Microanalysis</i> , 2021 , 27, 2588-2589	0.5	0
100	Evolution of new cell types at the lateral neural border. <i>Current Topics in Developmental Biology</i> , 2021 , 141, 173-205	5.3	3
99	Reframing cognition: getting down to biological basics. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2021 , 376, 20190750	5.8	25
98	Uncovering cognitive similarities and differences, conservation and innovation. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2021 , 376, 20200458	5.8	9
97	Elementary nervous systems. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2021 , 376, 20200347	5.8	17
96	Animal evolution: Of flame and collar cells. <i>Current Biology</i> , 2021 , 31, R1003-R1006	6.3	1
95	The Nereid on the rise: Platynereis as a model system. <i>EvoDevo</i> , 2021 , 12, 10	3.2	4
94	Whole-body integration of gene expression and single-cell morphology. <i>Cell</i> , 2021 , 184, 4819-4837.e22	56.2	17
93	Whole Body Integration of Gene Expression and Morphology Using Correlative Volume EM. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1044-1045	0.5	
92	The Evolutionary Assembly of Neuronal Machinery. <i>Current Biology</i> , 2020 , 30, R603-R616	6.3	29
91	A community-based transcriptomics classification and nomenclature of neocortical cell types. <i>Nature Neuroscience</i> , 2020 , 23, 1456-1468	25.5	76

90	From spiral cleavage to bilateral symmetry: the developmental cell lineage of the annelid brain. <i>BMC Biology</i> , 2019 , 17, 81	7.3	7
89	Remnants of ancestral larval eyes in an eyeless mollusk? Molecular characterization of photoreceptors in the scaphopod. <i>EvoDevo</i> , 2019 , 10, 25	3.2	0
88	Evolution of neuronal types and families. <i>Current Opinion in Neurobiology</i> , 2019 , 56, 144-152	7.6	49
87	Many Ways to Build a Polyp. <i>Trends in Genetics</i> , 2019 , 35, 885-887	8.5	2
86	Leveraging Domain Knowledge to Improve Microscopy Image Segmentation With Lifted Multicuts. <i>Frontiers in Computer Science</i> , 2019 , 1,	3.4	14
85	The ancestral retinoic acid receptor was a low-affinity sensor triggering neuronal differentiation. <i>Science Advances</i> , 2018 , 4, eaao1261	14.3	28
84	Animal Evolution: Convergent Nerve Cords?. <i>Current Biology</i> , 2018 , 28, R225-R227	6.3	19
83	Whole-Body Single-Cell Sequencing Reveals Transcriptional Domains in the Annelid Larval Body. <i>Molecular Biology and Evolution</i> , 2018 , 35, 1047-1062	8.3	29
82	Evolution of the bilaterian mouth and anus. <i>Nature Ecology and Evolution</i> , 2018 , 2, 1358-1376	12.3	21
81	Whole-head recording of chemosensory activity in the marine annelid. <i>Open Biology</i> , 2018 , 8,	7	13
80	genes and body segmentation. <i>Science</i> , 2018 , 361, 1310-1311	33.3	12
79	Whole-organism cellular gene-expression atlas reveals conserved cell types in the ventral nerve cord of. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 5878-5885	11.5	41
78	Loss and gain of cone types in vertebrate ciliary photoreceptor evolution. <i>Developmental Biology</i> , 2017 , 431, 26-35	3.1	14
77	How Single-Cell Genomics Is Changing Evolutionary and Developmental Biology. <i>Annual Review of Cell and Developmental Biology</i> , 2017 , 33, 537-553	12.6	57
76	The enigmatic xenopsins. <i>ELife</i> , 2017 , 6,	8.9	7
75	Animal Evolution: The Hard Problem of Cartilage Origins. <i>Current Biology</i> , 2016 , 26, R685-8	6.3	3
74	The origin and evolution of cell types. <i>Nature Reviews Genetics</i> , 2016 , 17, 744-757	30.1	323
73	From nerve net to nerve ring, nerve cord and brain--evolution of the nervous system. <i>Nature Reviews Neuroscience</i> , 2016 , 17, 61-72	13.5	124

72	Old knowledge and new technologies allow rapid development of model organisms. <i>Molecular Biology of the Cell</i> , 2016 , 27, 882-7	3.5	11
71	The mid-developmental transition and the evolution of animal body plans. <i>Nature</i> , 2016 , 531, 637-641	50.4	146
70	From damage response to action potentials: early evolution of neural and contractile modules in stem eukaryotes. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2016 , 371, 20150043	5.8	46
69	The evolutionary origin of bilaterian smooth and striated myocytes. <i>ELife</i> , 2016 , 5,	8.9	53
68	Neurotrophin, p75, and Trk Signaling Module in the Developing Nervous System of the Marine Annelid <i>Platynereis dumerilii</i> . <i>BioMed Research International</i> , 2016 , 2016, 2456062	3	7
67	High-throughput spatial mapping of single-cell RNA-seq data to tissue of origin. <i>Nature Biotechnology</i> , 2015 , 33, 503-9	44.5	280
66	Did the notochord evolve from an ancient axial muscle? The axochord hypothesis. <i>BioEssays</i> , 2015 , 37, 836-50	4.1	27
65	Gastric pouches and the mucociliary sole: setting the stage for nervous system evolution. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2015 , 370,	5.8	58
64	Quantifying Preferences and Responsiveness of Marine Zooplankton to Changing Environmental Conditions using Microfluidics. <i>PLoS ONE</i> , 2015 , 10, e0140553	3.7	7
63	Effects of low seawater pH on the marine polychaete <i>Platynereis dumerilii</i> . <i>Marine Pollution Bulletin</i> , 2015 , 95, 166-72	6.7	4
62	Illuminating the base of the annelid tree using transcriptomics. <i>Molecular Biology and Evolution</i> , 2014 , 31, 1391-401	8.3	226
61	Structural evolution of cell types by step-wise assembly of cellular modules. <i>Current Opinion in Genetics and Development</i> , 2014 , 27, 102-8	4.9	36
60	Development of the annelid axochord: insights into notochord evolution. <i>Science</i> , 2014 , 345, 1365-8	33.3	74
59	Evolution: ctenophore genomes and the origin of neurons. <i>Current Biology</i> , 2014 , 24, R757-61	6.3	54
58	Larval body patterning and apical organs are conserved in animal evolution. <i>BMC Biology</i> , 2014 , 12, 7	7.3	119
57	Melatonin signaling controls circadian swimming behavior in marine zooplankton. <i>Cell</i> , 2014 , 159, 46-57	56.2	86
56	Evolution of clitellate phaosomes from rhabdomeric photoreceptor cells of polychaetes - a study in the leech <i>Helobdella robusta</i> (Annelida, Sedentaria, Clitellata). <i>Frontiers in Zoology</i> , 2013 , 10, 52	2.8	10
55	The bilaterian forebrain: an evolutionary chimaera. <i>Current Opinion in Neurobiology</i> , 2013 , 23, 1080-9	7.6	63

54	Insights into bilaterian evolution from three spiralian genomes. <i>Nature</i> , 2013 , 493, 526-31	50.4	424
53	Linking micro- and macro-evolution at the cell type level: a view from the lophotrochozoan <i>Platynereis dumerilii</i> . <i>Briefings in Functional Genomics</i> , 2013 , 12, 430-9	4.9	16
52	Mesoteloblast-like mesodermal stem cells in the polychaete annelid <i>Platynereis dumerilii</i> (Nereididae). <i>Journal of Experimental Zoology Part B: Molecular and Developmental Evolution</i> , 2013 , 320, 94-104	1.8	23
51	Methods for generating year-round access to amphioxus in the laboratory. <i>PLoS ONE</i> , 2013 , 8, e71599	3.7	16
50	Molecular analysis of the amphioxus frontal eye unravels the evolutionary origin of the retina and pigment cells of the vertebrate eye. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 15383-8	11.5	100
49	Extensive chordate and annelid macrosynteny reveals ancestral homeobox gene organization. <i>Molecular Biology and Evolution</i> , 2012 , 29, 157-65	8.3	40
48	A holistic approach to marine eco-systems biology. <i>PLoS Biology</i> , 2011 , 9, e1001177	9.7	265
47	The segmental pattern of <i>otx</i> , <i>gbx</i> , and <i>Hox</i> genes in the annelid <i>Platynereis dumerilii</i> . <i>Evolution & Development</i> , 2011 , 13, 72-9	2.6	65
46	Ancient animal microRNAs and the evolution of tissue identity. <i>Nature</i> , 2010 , 463, 1084-8	50.4	233
45	Six3 demarcates the anterior-most developing brain region in bilaterian animals. <i>EvoDevo</i> , 2010 , 1, 14	3.2	113
44	Profiling by image registration reveals common origin of annelid mushroom bodies and vertebrate pallium. <i>Cell</i> , 2010 , 142, 800-9	56.2	224
43	Hedgehog signaling regulates segment formation in the annelid <i>Platynereis</i> . <i>Science</i> , 2010 , 329, 339-42	33.3	74
42	Three consecutive generations of nephridia occur during development of <i>Platynereis dumerilii</i> (Annelida, Polychaeta). <i>Developmental Dynamics</i> , 2010 , 239, 1967-76	2.9	8
41	The normal development of <i>Platynereis dumerilii</i> (Nereididae, Annelida). <i>Frontiers in Zoology</i> , 2010 , 7, 31	2.8	121
40	The 'division of labour' model of eye evolution. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2009 , 364, 2809-17	5.8	65
39	The evolution of phototransduction and eyes. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2009 , 364, 2791-3	5.8	20
38	CNS evolution: new insight from the mud. <i>Current Biology</i> , 2009 , 19, R640-2	6.3	22
37	Features of the ancestral bilaterian inferred from <i>Platynereis dumerilii</i> ParaHox genes. <i>BMC Biology</i> , 2009 , 7, 43	7.3	50

36	Mechanism of phototaxis in marine zooplankton. <i>Nature</i> , 2008 , 456, 395-9	50.4	208
35	The evolution of cell types in animals: emerging principles from molecular studies. <i>Nature Reviews Genetics</i> , 2008 , 9, 868-82	30.1	309
34	atonal- and achaete-scute-related genes in the annelid <i>Platynereis dumerilii</i> : insights into the evolution of neural basic-Helix-Loop-Helix genes. <i>BMC Evolutionary Biology</i> , 2008 , 8, 170	3	46
33	Eye evolution: the blurry beginning. <i>Current Biology</i> , 2008 , 18, R1096-8	6.3	30
32	The evolution of nervous system centralization. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2008 , 363, 1523-8	5.8	152
31	Cellular resolution expression profiling using confocal detection of NBT/BCIP precipitate by reflection microscopy. <i>BioTechniques</i> , 2007 , 42, 751-5	2.5	67
30	Conserved sensory-neurosecretory cell types in annelid and fish forebrain: insights into hypothalamus evolution. <i>Cell</i> , 2007 , 129, 1389-400	56.2	286
29	Hox gene expression in larval development of the polychaetes <i>Nereis virens</i> and <i>Platynereis dumerilii</i> (Annelida, Lophotrochozoa). <i>Development Genes and Evolution</i> , 2007 , 217, 39-54	1.8	92
28	Polychaete trunk neuroectoderm converges and extends by mediolateral cell intercalation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 2727-32	11.5	42
27	Duplication of the ribosomal gene cluster in the marine polychaete <i>Platynereis dumerilii</i> correlates with ITS polymorphism. <i>Journal of the Marine Biological Association of the United Kingdom</i> , 2007 , 87, 443-449	1.1	8
26	Molecular architecture of annelid nerve cord supports common origin of nervous system centralization in bilateria. <i>Cell</i> , 2007 , 129, 277-88	56.2	345
25	Photoreceptor cells and eyes in Annelida. <i>Arthropod Structure and Development</i> , 2006 , 35, 211-30	1.8	64
24	Evolution of intraflagellar transport from coated vesicles and autogenous origin of the eukaryotic cilium. <i>BioEssays</i> , 2006 , 28, 191-8	4.1	192
23	Vertebrate-type intron-rich genes in the marine annelid <i>Platynereis dumerilii</i> . <i>Science</i> , 2005 , 310, 1325-6	33.3	198
22	Fluorescent two-color whole mount in situ hybridization in <i>Platynereis dumerilii</i> (Polychaeta, Annelida), an emerging marine molecular model for evolution and development. <i>BioTechniques</i> , 2005 , 39, 460, 462, 464	2.5	69
21	Genes and homology in nervous system evolution: comparing gene functions, expression patterns, and cell type molecular fingerprints. <i>Theory in Biosciences</i> , 2005 , 124, 185-97	1.3	38
20	Metazoan Evolution: Some Animals Are More Equal than Others. <i>Current Biology</i> , 2004 , 14, R106-R108	6.3	33
19	Ciliary photoreceptors with a vertebrate-type opsin in an invertebrate brain. <i>Science</i> , 2004 , 306, 869-71	33.3	322

18	Metazoan evolution: some animals are more equal than others. <i>Current Biology</i> , 2004 , 14, R106-8	6.3	17
17	Spiralians in the limelight. <i>Genome Biology</i> , 2003 , 5, 303	18.3	3
16	Evolution of eyes and photoreceptor cell types. <i>International Journal of Developmental Biology</i> , 2003 , 47, 563-71	1.9	245
15	Development of pigment-cup eyes in the polychaete <i>Platynereis dumerilii</i> and evolutionary conservation of larval eyes in Bilateria. <i>Development (Cambridge)</i> , 2002 , 129, 1143-1154	6.6	139
14	Development of pigment-cup eyes in the polychaete <i>Platynereis dumerilii</i> and evolutionary conservation of larval eyes in Bilateria. <i>Development (Cambridge)</i> , 2002 , 129, 1143-54	6.6	76
13	Evolution of the bilaterian larval foregut. <i>Nature</i> , 2001 , 409, 81-5	50.4	211
12	Reconstructing the eyes of Urbilateria. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2001 , 356, 1545-63	5.8	146
11	Medaka eyeless is the key factor linking retinal determination and eye growth. <i>Development (Cambridge)</i> , 2001 , 128, 4035-4044	6.6	102
10	Rearranging gastrulation in the name of yolk: evolution of gastrulation in yolk-rich amniote eggs. <i>Mechanisms of Development</i> , 1999 , 81, 3-22	1.7	101
9	Dorsal or ventral: similarities in fate maps and gastrulation patterns in annelids, arthropods and chordates. <i>Mechanisms of Development</i> , 1997 , 61, 7-21	1.7	138
8	Enteropneusts and chordate evolution. <i>Current Biology</i> , 1996 , 6, 352-3	6.3	44
7	Common ground plans in early brain development in mice and flies. <i>BioEssays</i> , 1996 , 18, 255-9	4.1	89
6	The evolutionary origin of bilaterian smooth and striated myocytes		3
5	Whole-body integration of gene expression and single-cell morphology		5
4	Mapping single-cell atlases throughout Metazoa unravels cell type evolution		4
3	Whole-head recording of chemosensory activity in the marine annelid <i>Platynereis dumerilii</i>		2
2	Profiling cellular diversity in sponges informs animal cell type and nervous system evolution		22
1	Whole-body single-cell sequencing of the <i>Platynereis</i> larva reveals a subdivision into apical versus non-apical tissues		1

