

# Detlev Arendt

## List of Publications by Citations

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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	Insights into bilaterian evolution from three spiralian genomes. <i>Nature</i> , <b>2013</b> , 493, 526-31	50.4	424
106	Molecular architecture of annelid nerve cord supports common origin of nervous system centralization in bilateria. <i>Cell</i> , <b>2007</b> , 129, 277-88	56.2	345
105	The origin and evolution of cell types. <i>Nature Reviews Genetics</i> , <b>2016</b> , 17, 744-757	30.1	323
104	Ciliary photoreceptors with a vertebrate-type opsin in an invertebrate brain. <i>Science</i> , <b>2004</b> , 306, 869-71	33.3	322
103	The evolution of cell types in animals: emerging principles from molecular studies. <i>Nature Reviews Genetics</i> , <b>2008</b> , 9, 868-82	30.1	309
102	Conserved sensory-neurosecretory cell types in annelid and fish forebrain: insights into hypothalamus evolution. <i>Cell</i> , <b>2007</b> , 129, 1389-400	56.2	286
101	High-throughput spatial mapping of single-cell RNA-seq data to tissue of origin. <i>Nature Biotechnology</i> , <b>2015</b> , 33, 503-9	44.5	280
100	A holistic approach to marine eco-systems biology. <i>PLoS Biology</i> , <b>2011</b> , 9, e1001177	9.7	265
99	Evolution of eyes and photoreceptor cell types. <i>International Journal of Developmental Biology</i> , <b>2003</b> , 47, 563-71	1.9	245
98	Ancient animal microRNAs and the evolution of tissue identity. <i>Nature</i> , <b>2010</b> , 463, 1084-8	50.4	233
97	Illuminating the base of the annelid tree using transcriptomics. <i>Molecular Biology and Evolution</i> , <b>2014</b> , 31, 1391-401	8.3	226
96	Profiling by image registration reveals common origin of annelid mushroom bodies and vertebrate pallium. <i>Cell</i> , <b>2010</b> , 142, 800-9	56.2	224
95	Evolution of the bilaterian larval foregut. <i>Nature</i> , <b>2001</b> , 409, 81-5	50.4	211
94	Mechanism of phototaxis in marine zooplankton. <i>Nature</i> , <b>2008</b> , 456, 395-9	50.4	208
93	Vertebrate-type intron-rich genes in the marine annelid <i>Platynereis dumerilii</i> . <i>Science</i> , <b>2005</b> , 310, 1325-6	33.3	198
92	Evolution of intraflagellar transport from coated vesicles and autogenous origin of the eukaryotic cilium. <i>BioEssays</i> , <b>2006</b> , 28, 191-8	4.1	192
91	The evolution of nervous system centralization. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2008</b> , 363, 1523-8	5.8	152

90	The mid-developmental transition and the evolution of animal body plans. <i>Nature</i> , <b>2016</b> , 531, 637-641	50.4	146
89	Reconstructing the eyes of Urbilateria. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2001</b> , 356, 1545-63	5.8	146
88	Development of pigment-cup eyes in the polychaete <i>Platynereis dumerilii</i> and evolutionary conservation of larval eyes in Bilateria. <i>Development (Cambridge)</i> , <b>2002</b> , 129, 1143-1154	6.6	139
87	Dorsal or ventral: similarities in fate maps and gastrulation patterns in annelids, arthropods and chordates. <i>Mechanisms of Development</i> , <b>1997</b> , 61, 7-21	1.7	138
86	From nerve net to nerve ring, nerve cord and brain--evolution of the nervous system. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 61-72	13.5	124
85	The normal development of <i>Platynereis dumerilii</i> (Nereididae, Annelida). <i>Frontiers in Zoology</i> , <b>2010</b> , 7, 31	2.8	121
84	Larval body patterning and apical organs are conserved in animal evolution. <i>BMC Biology</i> , <b>2014</b> , 12, 7	7.3	119
83	Six3 demarcates the anterior-most developing brain region in bilaterian animals. <i>EvoDevo</i> , <b>2010</b> , 1, 14	3.2	113
82	Medaka eyeless is the key factor linking retinal determination and eye growth. <i>Development (Cambridge)</i> , <b>2001</b> , 128, 4035-4044	6.6	102
81	Rearranging gastrulation in the name of yolk: evolution of gastrulation in yolk-rich amniote eggs. <i>Mechanisms of Development</i> , <b>1999</b> , 81, 3-22	1.7	101
80	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> , <b>2012</b> , 109, 15383-8	11.5	100
79	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> , <b>2007</b> , 217, 39-54	1.8	92
78	Common ground plans in early brain development in mice and flies. <i>BioEssays</i> , <b>1996</b> , 18, 255-9	4.1	89
77	Melatonin signaling controls circadian swimming behavior in marine zooplankton. <i>Cell</i> , <b>2014</b> , 159, 46-57	56.2	86
76	A community-based transcriptomics classification and nomenclature of neocortical cell types. <i>Nature Neuroscience</i> , <b>2020</b> , 23, 1456-1468	25.5	76
75	Development of pigment-cup eyes in the polychaete <i>Platynereis dumerilii</i> and evolutionary conservation of larval eyes in Bilateria. <i>Development (Cambridge)</i> , <b>2002</b> , 129, 1143-54	6.6	76
74	Development of the annelid axochord: insights into notochord evolution. <i>Science</i> , <b>2014</b> , 345, 1365-8	33.3	74
73	Hedgehog signaling regulates segment formation in the annelid <i>Platynereis</i> . <i>Science</i> , <b>2010</b> , 329, 339-42	33.3	74

72	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> , <b>2005</b> , 39, 460, 462, 464	2.5	69
71	Cellular resolution expression profiling using confocal detection of NBT/BCIP precipitate by reflection microscopy. <i>BioTechniques</i> , <b>2007</b> , 42, 751-5	2.5	67
70	The segmental pattern of <i>otx</i> , <i>gbx</i> , and <i>Hox</i> genes in the annelid <i>Platynereis dumerilii</i> . <i>Evolution &amp; Development</i> , <b>2011</b> , 13, 72-9	2.6	65
69	The 'division of labour' model of eye evolution. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2009</b> , 364, 2809-17	5.8	65
68	Photoreceptor cells and eyes in Annelida. <i>Arthropod Structure and Development</i> , <b>2006</b> , 35, 211-30	1.8	64
67	The bilaterian forebrain: an evolutionary chimaera. <i>Current Opinion in Neurobiology</i> , <b>2013</b> , 23, 1080-9	7.6	63
66	Gastric pouches and the mucociliary sole: setting the stage for nervous system evolution. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2015</b> , 370,	5.8	58
65	How Single-Cell Genomics Is Changing Evolutionary and Developmental Biology. <i>Annual Review of Cell and Developmental Biology</i> , <b>2017</b> , 33, 537-553	12.6	57
64	Evolution: ctenophore genomes and the origin of neurons. <i>Current Biology</i> , <b>2014</b> , 24, R757-61	6.3	54
63	The evolutionary origin of bilaterian smooth and striated myocytes. <i>ELife</i> , <b>2016</b> , 5,	8.9	53
62	Features of the ancestral bilaterian inferred from <i>Platynereis dumerilii</i> ParaHox genes. <i>BMC Biology</i> , <b>2009</b> , 7, 43	7.3	50
61	Evolution of neuronal types and families. <i>Current Opinion in Neurobiology</i> , <b>2019</b> , 56, 144-152	7.6	49
60	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> , <b>2016</b> , 371, 20150043	5.8	46
59	<i>atonal</i> - and <i>achaete-scute</i> -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> , <b>2008</b> , 8, 170	3	46
58	Enteropneusts and chordate evolution. <i>Current Biology</i> , <b>1996</b> , 6, 352-3	6.3	44
57	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> , <b>2007</b> , 104, 2727-32	11.5	42
56	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> , <b>2017</b> , 114, 5878-5885	11.5	41
55	Extensive chordate and annelid macrosynteny reveals ancestral homeobox gene organization. <i>Molecular Biology and Evolution</i> , <b>2012</b> , 29, 157-65	8.3	40

54	Genes and homology in nervous system evolution: comparing gene functions, expression patterns, and cell type molecular fingerprints. <i>Theory in Biosciences</i> , <b>2005</b> , 124, 185-97	1.3	38
53	Structural evolution of cell types by step-wise assembly of cellular modules. <i>Current Opinion in Genetics and Development</i> , <b>2014</b> , 27, 102-8	4.9	36
52	Metazoan Evolution: Some Animals Are More Equal than Others. <i>Current Biology</i> , <b>2004</b> , 14, R106-R108	6.3	33
51	Eye evolution: the blurry beginning. <i>Current Biology</i> , <b>2008</b> , 18, R1096-8	6.3	30
50	The Evolutionary Assembly of Neuronal Machinery. <i>Current Biology</i> , <b>2020</b> , 30, R603-R616	6.3	29
49	Whole-Body Single-Cell Sequencing Reveals Transcriptional Domains in the Annelid Larval Body. <i>Molecular Biology and Evolution</i> , <b>2018</b> , 35, 1047-1062	8.3	29
48	The ancestral retinoic acid receptor was a low-affinity sensor triggering neuronal differentiation. <i>Science Advances</i> , <b>2018</b> , 4, eaao1261	14.3	28
47	Did the notochord evolve from an ancient axial muscle? The axochord hypothesis. <i>BioEssays</i> , <b>2015</b> , 37, 836-50	4.1	27
46	Reframing cognition: getting down to biological basics. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2021</b> , 376, 20190750	5.8	25
45	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> , <b>2013</b> , 320, 94-104	1.8	23
44	CNS evolution: new insight from the mud. <i>Current Biology</i> , <b>2009</b> , 19, R640-2	6.3	22
43	Profiling cellular diversity in sponges informs animal cell type and nervous system evolution		22
42	Evolution of the bilaterian mouth and anus. <i>Nature Ecology and Evolution</i> , <b>2018</b> , 2, 1358-1376	12.3	21
41	The evolution of phototransduction and eyes. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2009</b> , 364, 2791-3	5.8	20
40	Mapping single-cell atlases throughout Metazoa unravels cell type evolution. <i>ELife</i> , <b>2021</b> , 10,	8.9	20
39	Animal Evolution: Convergent Nerve Cords?. <i>Current Biology</i> , <b>2018</b> , 28, R225-R227	6.3	19
38	Elementary nervous systems. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2021</b> , 376, 20200347	5.8	17
37	Whole-body integration of gene expression and single-cell morphology. <i>Cell</i> , <b>2021</b> , 184, 4819-4837.e22	56.2	17

36	Metazoan evolution: some animals are more equal than others. <i>Current Biology</i> , <b>2004</b> , 14, R106-8	6.3	17
35	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> , <b>2013</b> , 12, 430-9	4.9	16
34	Methods for generating year-round access to amphioxus in the laboratory. <i>PLoS ONE</i> , <b>2013</b> , 8, e71599	3.7	16
33	Profiling cellular diversity in sponges informs animal cell type and nervous system evolution. <i>Science</i> , <b>2021</b> , 374, 717-723	33.3	15
32	Leveraging Domain Knowledge to Improve Microscopy Image Segmentation With Lifted Multicuts. <i>Frontiers in Computer Science</i> , <b>2019</b> , 1,	3.4	14
31	Loss and gain of cone types in vertebrate ciliary photoreceptor evolution. <i>Developmental Biology</i> , <b>2017</b> , 431, 26-35	3.1	14
30	Whole-head recording of chemosensory activity in the marine annelid. <i>Open Biology</i> , <b>2018</b> , 8,	7	13
29	genes and body segmentation. <i>Science</i> , <b>2018</b> , 361, 1310-1311	33.3	12
28	Old knowledge and new technologies allow rapid development of model organisms. <i>Molecular Biology of the Cell</i> , <b>2016</b> , 27, 882-7	3.5	11
27	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> , <b>2013</b> , 10, 52	2.8	10
26	Uncovering cognitive similarities and differences, conservation and innovation. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2021</b> , 376, 20200458	5.8	9
25	Three consecutive generations of nephridia occur during development of <i>Platynereis dumerilii</i> (Annelida, Polychaeta). <i>Developmental Dynamics</i> , <b>2010</b> , 239, 1967-76	2.9	8
24	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> , <b>2007</b> , 87, 443-449	11.1	8
23	From spiral cleavage to bilateral symmetry: the developmental cell lineage of the annelid brain. <i>BMC Biology</i> , <b>2019</b> , 17, 81	7.3	7
22	The enigmatic xenopsins. <i>ELife</i> , <b>2017</b> , 6,	8.9	7
21	Quantifying Preferences and Responsiveness of Marine Zooplankton to Changing Environmental Conditions using Microfluidics. <i>PLoS ONE</i> , <b>2015</b> , 10, e0140553	3.7	7
20	Neurotrophin, p75, and Trk Signaling Module in the Developing Nervous System of the Marine Annelid <i>Platynereis dumerilii</i> . <i>BioMed Research International</i> , <b>2016</b> , 2016, 2456062	3	7
19	The dorsoanterior brain of adult amphioxus shares similarities in expression profile and neuronal composition with the vertebrate telencephalon. <i>BMC Biology</i> , <b>2021</b> , 19, 110	7.3	6

18	Whole-body integration of gene expression and single-cell morphology		5
17	Effects of low seawater pH on the marine polychaete <i>Platynereis dumerilii</i> . <i>Marine Pollution Bulletin</i> , <b>2015</b> , 95, 166-72	6.7	4
16	Mapping single-cell atlases throughout Metazoa unravels cell type evolution		4
15	The Nereid on the rise: <i>Platynereis</i> as a model system. <i>EvoDevo</i> , <b>2021</b> , 12, 10	3.2	4
14	Animal Evolution: The Hard Problem of Cartilage Origins. <i>Current Biology</i> , <b>2016</b> , 26, R685-8	6.3	3
13	Spiralians in the limelight. <i>Genome Biology</i> , <b>2003</b> , 5, 303	18.3	3
12	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> , <b>2021</b> , 10,	8.9	3
11	The evolutionary origin of bilaterian smooth and striated myocytes		3
10	Evolution of new cell types at the lateral neural border. <i>Current Topics in Developmental Biology</i> , <b>2021</b> , 141, 173-205	5.3	3
9	Many Ways to Build a Polyp. <i>Trends in Genetics</i> , <b>2019</b> , 35, 885-887	8.5	2
8	Whole-head recording of chemosensory activity in the marine annelid <i>Platynereis dumerilii</i>		2
7	Whole-body single-cell sequencing of the <i>Platynereis</i> larva reveals a subdivision into apical versus non-apical tissues		1
6	Animal evolution: Of flame and collar cells. <i>Current Biology</i> , <b>2021</b> , 31, R1003-R1006	6.3	1
5	Remnants of ancestral larval eyes in an eyeless mollusk? Molecular characterization of photoreceptors in the scaphopod. <i>EvoDevo</i> , <b>2019</b> , 10, 25	3.2	0
4	The conserved core of the nereid brain: Circular CNS, apical nervous system and <i>lhx6-<i>arx-dlx</i></i> neurons. <i>Current Opinion in Neurobiology</i> , <b>2021</b> , 71, 178-187	7.6	0
3	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> , <b>2021</b> , 27, 2588-2589	0.5	0
2	Molecular biology for green recovery-A call for action.. <i>PLoS Biology</i> , <b>2022</b> , 20, e3001623	9.7	0
1	Whole Body Integration of Gene Expression and Morphology Using Correlative Volume EM. <i>Microscopy and Microanalysis</i> , <b>2020</b> , 26, 1044-1045	0.5	

