# Robert D Burke

List of Publications by Year
in descending order



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|---|---|---|---|
| 114 papers | 5,958 citations | 66343 42 h-index | 76900 74 g-index |
| 116 all docs | 116 docs citations | 116 times ranked | 4525 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The Genome of the Sea Urchin Strongylocentrotus purpuratus. Science, 2006, 314, 941-952. | 12.6 | 1,018 |
| 2 | A genomic view of the sea urchin nervous system. Developmental Biology, 2006, 300, 434-460. | 2.0 | 260 |
| 3 | Growth of Francisella spp. in rodent macrophages. Infection and Immunity, 1991, 59, 3291-3296. | 2.2 | 206 |
| 4 | The induction of metamorphosis of marine invertebrate larvae: stimulus and response. Canadian Journal of Zoology, 1983, 61, 1701-1719. | 1.0 | 177 |
| 5 | The echinoderm adhesome. Developmental Biology, 2006, 300, 252-266. | 2.0 | 158 |
| 6 | Divergent patterns of neural development in larval echinoids and asteroids. Evolution & Development, 2004, 6, 95-104. | 2.0 | 143 |
| 7 | An Effective Polymer Cross-Linking Strategy To Obtain Stable Dispersions of Upconverting NaYF<sub>4</sub> Nanoparticles in Buffers and Biological Growth Media for Biolabeling Applications. Langmuir, 2012, 28, 3239-3247. | 3.5 | 134 |
| 8 | The origin of pigment cells in embryos of the sea urchin Strongylocentrotus purpuratus. Developmental Biology, 1985, 107, 414-419. | 2.0 | 124 |
| 9 | Development of the nervous system of the pluteus larva of Strongylocentrotus droebachiensis. Cell and Tissue Research, 1987, 248, 335. | 2.9 | 114 |
| 10 | Bioconjugation of Ln3+-Doped LaF3Nanoparticles to Avidin. Langmuir, 2006, 22, 1782-1788. | 3.5 | 105 |
| 11 | The evolution of nervous system patterning: insights from sea urchin development. Development (Cambridge), 2011, 138, 3613-3623. | 2.5 | 102 |
| 12 | Cell movements during the initial phase of gastrulation in the sea urchin embryo. Developmental Biology, 1991, 146, 542-557. | 2.0 | 100 |
| 13 | Pheromonal Control of Metamorphosis in the Pacific Sand Dollar, Dendraster excentricus. Science, 1984, 225, 442-443. | 12.6 | 96 |
| 14 | Development of Serotonergic Neurons in Embryos of the Sea Urchin, Strongylocentrotus purpuratus. (serotonergic/neural development/embryo/echinoid). Development Growth and Differentiation, 1986, 28, 569-574. | 1.5 | 90 |
| 15 | The structure of the nervous system of the pluteus larva of Strongylocentrotus purpuratus. Cell and Tissue Research, 1978, 191, 233-47. | 2.9 | 89 |
| 16 | Apical organs in echinoderm larvae: insights into larval evolution in the Ambulacraria. Evolution & Development, 2007, 9, 432-445. | 2.0 | 88 |
| 17 | Invertebrate Integrins: Structure, Function, and Evolution. International Review of Cytology, 1999, 191, 257-284. | 6.2 | 87 |
| 18 | Specification of ectoderm restricts the size of the animal plate and patterns neurogenesis in sea urchin embryos. Development (Cambridge), 2006, 133, 2337-2346. | 2.5 | 87 |

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|---|---|---|---|
| 19 | A global view of gene expression in lithium and zinc treated sea urchin embryos: new components of gene regulatory networks. Genome Biology, 2007, 8, R85. | 9.6 | 84 |
| 20 | Neuron-specific expression of a synaptotagmin gene in the sea urchinStrongylocentrotus purpuratus. Journal of Comparative Neurology, 2006, 496, 244-251. | 1.6 | 76 |
| 21 | TGFÎ² signaling positions the ciliary band and patterns neurons in the sea urchin embryo. Developmental Biology, 2010, 347, 71-81. | 2.0 | 75 |
| 22 | Identification and structural basis of binding to host lung glycogen by streptococcal virulence factors. Nature Structural and Molecular Biology, 2007, 14, 76-84. | 8.2 | 72 |
| 23 | Expression of an NK2 homeodomain gene in the apical ectoderm defines a new territory in the early sea urchin embryo. Developmental Biology, 2004, 269, 152-164. | 2.0 | 71 |
| 24 | NEURAL CONTROL OF METAMORPHOSIS INDENDRASTER EXCENTRICUS. Biological Bulletin, 1983, 164, 176-188. | 1.8 | 67 |
| 25 | Secondary mesenchyme of the sea urchin embryo: Ontogeny of blastocoelar cells. The Journal of Experimental Zoology, 1992, 262, 51-60. | 1.4 | 65 |
| 26 | Structure of the digestive tract of the pluteus larva of Dendraster excentricus (Echinodermata:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46 | 0.8 | 64 |
| 27 | The Initial Phase of Gastrulation in Sea Urchins Is Accompanied by the Formation of Bottle Cells. Developmental Biology, 1996, 179, 436-446. | 2.0 | 64 |
| 28 | Neurogenesis in sea urchin embryos and the diversity of deuterostome neurogenic mechanisms. Development (Cambridge), 2015, 143, 286-97. | 2.5 | 63 |
| 29 | STRUCTURE OF THE NERVOUS SYSTEM OF THE AURICULARIA LARVA OFPARASTICOPUS CALIFORNICUS. Biological Bulletin, 1986, 170, 450-460. | 1.8 | 60 |
| 30 | Development of the esophageal muscles in embryos of the sea urchin Strongylocentrotus purpuratus. Cell and Tissue Research, 1988, 252, 411-7. | 2.9 | 60 |
| 31 | Podial sensory receptors and the induction of metamorphosis in echinoids. Journal of Experimental Marine Biology and Ecology, 1980, 47, 223-234. | 1.5 | 59 |
| 32 | Isolation of the neuropeptide SALMFamide-1 from starfish using a new antiserum. Peptides, 1991, 12, 455-459. | 2.4 | 59 |
| 33 | A novel permalloy based magnetic single cell micro array. Lab on A Chip, 2009, 9, 2381. | 6.0 | 58 |
| 34 | Development of the larval nervous system of the sand dollar, Dendraster excentricus. Cell and Tissue Research, 1983, 229, 145-54. | 2.9 | 56 |
| 35 | Mechanisms of arm-tip regeneration in the sea star, Leptasterias hexactis. Roux's Archives of Developmental Biology, 1989, 198, 19-28. | 1.2 | 56 |
| 36 | Blood Group Antigen Recognition by a Streptococcus pneumoniae Virulence Factor. Journal of Biological Chemistry, 2006, 281, 35263-35271. | 3.4 | 55 |

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| 37 | A functional genomic and proteomic perspective of sea urchin calcium signaling and egg activation. Developmental Biology, 2006, 300, 416-433. | 2.0 | 53 |
| 38 | The structure of the larval nervous system ofPisaster ochraceus (Echinodermata: Asteroidea). Journal of Morphology, 1983, 178, 23-35. | 1.2 | 52 |
| 39 | Immunocytochemical localization of the neuropeptide S1 and serotonin in larvae of the starfishPisaster ochraceusandAsterias rubens. Journal of the Marine Biological Association of the United Kingdom, 1994, 74, 61-71. | 0.8 | 51 |
| 40 | ARS2 Is a Conserved Eukaryotic Gene Essential for Early Mammalian Development. Molecular and Cellular Biology, 2008, 28, 1503-1514. | 2.3 | 49 |
| 41 | Sp-Smad2/3 mediates patterning of neurogenic ectoderm by nodal in the sea urchin embryo. Developmental Biology, 2007, 302, 494-503. | 2.0 | 46 |
| 42 | Cloning and Characterization of Novel Î² Integrin Subunits from a Sea Urchin. Developmental Biology, 1997, 181, 234-245. | 2.0 | 43 |
| 43 | Shope Fibroma Virus RING Finger Protein N1R Binds DNA and Inhibits Apoptosis. Virology, 1998, 249, 42-51. | 2.4 | 42 |
| 44 | The Conformation and Function of a Multimodular Glycogen-Degrading Pneumococcal Virulence Factor. Structure, 2011, 19, 640-651. | 3.3 | 42 |
| 45 | The Structure and Development of the Apical Ganglion in the Sea Urchin Pluteus Larvae of Strongylocentrotus droebachiensis and Mespilia globulus. (apical ganglion/anti-serotonin/sea urchin) Tj ETQq1 1 0.784314 rgBT /Over<br>531-538. | 1.5 | 41 |
| 46 | Endo16, a Large Multidomain Protein Found on the Surface and ECM of Endodermal Cells during Sea Urchin Gastrulation, Binds Calcium. Developmental Biology, 1994, 165, 73-85. | 2.0 | 41 |
| 47 | Differential Recognition and Hydrolysis of Host Carbohydrate Antigens by Streptococcus pneumoniae Family 98 Glycoside Hydrolases. Journal of Biological Chemistry, 2009, 284, 26161-26173. | 3.4 | 41 |
| 48 | Embryonic neurogenesis in echinoderms. Wiley Interdisciplinary Reviews: Developmental Biology, 2018, 7, e316. | 5.9 | 41 |
| 49 | Sea urchin neural development and the metazoan paradigm of neurogenesis. Genesis, 2014, 52, 208-221. | 1.6 | 40 |
| 50 | Migratory and invasive behavior of pigment cells in normal and animalized sea urchin embryos. Experimental Cell Research, 1987, 173, 546-557. | 2.6 | 39 |
| 51 | Divergent roles for Eph and Ephrin in Avian Cranial Neural Crest. BMC Developmental Biology, 2008, 8, 56. | 2.1 | 39 |
| 52 | Localization of a SALMFamide Neuropeptide in the Larval Nervous System of the Sand Dollar Dendraster excentricus. Acta Zoologica, 1992, 73, 207-212. | 0.8 | 37 |
| 53 | Ectromelia virus virulence factor p28 acts upstream of caspase-3 in response to UV light-induced apoptosis. Journal of General Virology, 2000, 81, 1087-1097. | 2.9 | 37 |
| 54 | The Î²L Integrin Subunit Is Necessary for Gastrulation in Sea Urchin Embryos. Developmental Biology, 1998, 203, 134-148. | 2.0 | 34 |

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|---|---|---|---|
| 55 | Development of an Autonomous Biological Cell Manipulator With Single-Cell Electroporation and Visual Servoing Capabilities. IEEE Transactions on Biomedical Engineering, 2009, 56, 2064-2074. | 4.2 | 34 |
| 56 | Improved method for benzoyl chloride derivatization of polyamines for high-peformance liquid chromatography. Journal of Chromatography A, 1987, 408, 227-233. | 3.7 | 32 |
| 57 | Characterization of the pathogenicity island protein PdpA and its role in the virulence of Francisella novicida. Microbiology (United Kingdom), 2009, 155, 1489-1497. | 1.8 | 32 |
| 58 | Notch signaling patterns neurogenic ectoderm and regulates the asymmetric division of neural progenitors in sea urchin embryos. Development (Cambridge), 2017, 144, 3602-3611. | 2.5 | 32 |
| 59 | Comparative genomic sequence analysis of the Williams syndrome region (LIMK1-RFC2) of human Chromosome 7q11.23. Mammalian Genome, 2000, 11, 890-898. | 2.2 | 31 |
| 60 | Identification, characterization and deduced amino acid sequence of the dominant protease from Kudoa paniformis and K. thyrsites: A unique cytoplasmic cysteine protease. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2008, 149, 477-489. | 1.6 | 31 |
| 61 | Neural development of the brittlestar Amphiura filiformis. Development Genes and Evolution, 2009, 219, 159-166. | 0.9 | 31 |
| 62 | Developmental expression of COE across the Metazoa supports a conserved role in neuronal cell-type specification and mesodermal development. Development Genes and Evolution, 2010, 220, 221-234. | 0.9 | 28 |
| 63 | Fine structure of the doliolaria larva of the feather starFlorometra serratissima (Echinodermata:) Tj ETQq1 1 0.784314 rgBT /Overlock | 1.2 | 27 |
| 64 | Localized Electroporation: A Method for Targeting Expression of Genes in Avian Embryos. BioTechniques, 2000, 28, 94-100. | 1.8 | 27 |
| 65 | Virulence of Francisella spp. in Chicken Embryos. Infection and Immunity, 2006, 74, 4809-4816. | 2.2 | 27 |
| 66 | Development of pedicellariae in the pluteus larva of Lytechinus pictus (Echinodermata: Echinoidea). Canadian Journal of Zoology, 1980, 58, 1674-1682. | 1.0 | 26 |
| 67 | Stimulation of starfish coelomocytes by interleukin-1. Biochemical and Biophysical Research Communications, 1991, 180, 579-584. | 2.1 | 26 |
| 68 | Ontogeny of the holothurian larval nervous system: evolution of larval forms. Development Genes and Evolution, 2007, 217, 585-592. | 0.9 | 25 |
| 69 | The Apical Lamina and its Role in Cell Adhesion in Sea Urchin Embryos. Cell Adhesion and Communication, 1998, 5, 97-108. | 1.7 | 24 |
| 70 | The Î±BÎ²C Integrin Is Expressed on the Surface of the Sea Urchin Egg and Removed at Fertilization. Developmental Biology, 2000, 227, 633-647. | 2.0 | 22 |
| 71 | The molecular phylogeny of eph receptors and ephrin ligands. BMC Cell Biology, 2008, 9, 27. | 3.0 | 22 |
| 72 | Deuterostome neuroanatomy and the body plan paradox. Evolution & Development, 2011, 13, 110-115. | 2.0 | 22 |

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|---|---|---|---|
| 73 | Uptake of dissolved amino acids by embryos and larvae of Dendraster excentricus (Eschscholtz) (Echinodermata: Echinoidea). Canadian Journal of Zoology, 1983, 61, 349-354. | 1.0 | 21 |
| 74 | Machine vision-based localization of nucleic and cytoplasmic injection sites on low-contrast adherent cells. Medical and Biological Engineering and Computing, 2012, 50, 11-21. | 2.8 | 21 |
| 75 | Eph-Ephrin signaling and focal adhesion kinase regulate actomyosin-dependent apical constriction of ciliary band cells. Development (Cambridge), 2014, 141, 1075-1084. | 2.5 | 21 |
| 76 | Neural architecture of the brachiolaria larva of the starfish, Asterina pectinifera. Journal of Comparative Neurology, 2008, 509, 271-282. | 1.6 | 20 |
| 77 | Integrins on eggs: the Î²C subunit is essential for formation of the cortical actin cytoskeleton in sea urchin eggs. Developmental Biology, 2004, 265, 53-60. | 2.0 | 19 |
| 78 | Ontogeny and characterization of mesenchyme antigens of the sea urchin embryo. Developmental Biology, 1989, 136, 75-86. | 2.0 | 18 |
| 79 | Neural development in Eucidaris tribuloides and the evolutionary history of the echinoid larval nervous system. Developmental Biology, 2013, 377, 236-244. | 2.0 | 17 |
| 80 | Distribution of fibrillin I in extracellular matrix and epithelia during early development of avian embryos. Anatomy and Embryology, 2000, 201, 317-326. | 1.5 | 16 |
| 81 | Pl-nectin, a discoidin family member, is a ligand for Î²C integrins in the sea urchin embryo. Matrix Biology, 2010, 29, 341-345. | 3.6 | 15 |
| 82 | Ontogeny of vessel wall components in the outflow tract of the chick. Anatomy and Embryology, 1994, 189, 447-56. | 1.5 | 14 |
| 83 | Morphogenesis of the digestive tract of the pluteus larva ofStrongylocentrotus purpuratus:shaping and bending. International Journal of Invertebrate Reproduction, 1980, 2, 13-21. | 0.6 | 13 |
| 84 | An ectromelia virus profilin homolog interacts with cellular tropomyosin and viral A-type inclusion protein. Virology Journal, 2007, 4, 76. | 3.4 | 12 |
| 85 | Development of a five degree-of-freedom biomanipulator for autonomous single cell electroporation. , 2007, , . | | 11 |
| 86 | The sole LSm complex in Cyanidioschyzon merolae associates with pre-mRNA splicing and mRNA degradation factors. Rna, 2017, 23, 952-967. | 3.5 | 11 |
| 87 | Eph and Ephrin function in dispersal and epithelial insertion of pigmented immunocytes in sea urchin embryos. ELife, 2016, 5, . | 6.0 | 11 |
| 88 | Ontogeny of an Extracellular Matrix Component of Sea Urchins and its Role in Morphogenesis. (blastocoel/extracellular matrix/mesenchyme/sea urchin/morphogenesis). Development Growth and Differentiation, 1990, 32, 461-471. | 1.5 | 10 |
| 89 | Pigmented Follicle Cells and the Maturation of Oocytes in the Sand Dollar, Dendraster excentricus. (echinoid/follicle cells/oogenesis/maturation). Development Growth and Differentiation, 1989, 31, 431-437. | 1.5 | 8 |
| 90 | Chapter 16 Cytological Techniques for the Study of Larval Echinoids with Notes on Methods for Inducing Metamorphosis. Methods in Cell Biology, 1986, 27, 295-308. | 1.1 | 7 |

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|---|---|---|---|
| 91 | Collagen diversity in the sea urchin, strongylocentrotus purpuratus. Comparative Biochemistry and Physiology Part B: Comparative Biochemistry, 1989, 94, 41-44. | 0.2 | 7 |
| 92 | TEM and SEM Methods. Methods in Cell Biology, 2004, 74, 411-441. | 1.1 | 7 |
| 93 | Localized, Macromolecular Transport for Thin, Adherent, Single Cells Via an Automated, Single Cell Electroporation Biomanipulator. IEEE Transactions on Biomedical Engineering, 2013, 60, 3113-3123. | 4.2 | 7 |
| 94 | Ciliary photoreceptors in sea urchin larvae indicate pan-deuterostome cell type conservation. BMC Biology, 2021, 19, 257. | 3.8 | 7 |
| 95 | RoboSCell: an automated single cell arraying and analysis instrument. Biomedical Microdevices, 2009, 11, 1317-1330. | 2.8 | 6 |
| 96 | Integrins on eggs: focal adhesion kinase is activated at fertilization, forms a complex with integrins, and is necessary for cortex formation and cell cycle initiation. Molecular Biology of the Cell, 2013, 24, 3472-3481. | 2.1 | 6 |
| 97 | Imaging Neural Development in Embryonic and Larval Sea Urchins. Methods in Molecular Biology, 2014, 1128, 147-160. | 0.9 | 6 |
| 98 | Morphogenesis of the digestive tract of the pluteus larva ofStrongylocentrotus purpuratus: sphincter formation. International Journal of Invertebrate Reproduction, 1980, 2, 1-12. | 0.6 | 5 |
| 99 | A Generalized Tip-Membrane Contact Detection Algorithm for Automated Single Cell Electroporation Using Statistical Process Control. IEEE Transactions on Automation Science and Engineering, 2012, 9, 226-236. | 5.2 | 5 |
| 100 | Actin-mediated retraction of the larval epidermis during metamorphosis of the sand dollar, Dendraster excentricus. Cell and Tissue Research, 1985, 239, 589-97. | 2.9 | 4 |
| 101 | Polyamines and cell proliferation in the sea star Pycnopodia helianthoides. Comparative Biochemistry and Physiology Part B: Comparative Biochemistry, 1988, 90, 885-890. | 0.2 | 4 |
| 102 | SpADAM, a sea urchin ADAM, has conserved structure and expression. Mechanisms of Development, 2002, 117, 275-281. | 1.7 | 4 |
| 103 | Embryonic expression of engrailed in sea urchins. Gene Expression Patterns, 2006, 6, 566-571. | 0.8 | 4 |
| 104 | Localization and Characterization of an Integral Membrane Protein Antigen Expressed by Pigment Cells in Embryos of the Sea Urchin Strongylocentrotus purpuratus. (sea urchin/monoclonal) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 217 Tc | 1.5 | 3 |
| 105 | Characterization of Calflagin, a Flagellar Calcium-Binding Protein from Trypanosoma congolense. PLoS Neglected Tropical Diseases, 2016, 10, e0004510. | 3.0 | 3 |
| 106 | Integrin signaling in early sea urchin development. Signal Transduction, 2007, 7, 207-215. | 0.4 | 2 |
| 107 | Transforming a transcription factor. ELife, 2018, 7, . | 6.0 | 1 |
| 108 | Pigment cells: Paragons of cellular development. Current Topics in Developmental Biology, 2022, 146, 149-182. | 2.2 | 1 |

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|---|---|---|---|
| 109 | Lynne M. Angerer: An originator of RNA in situ hybridization. Molecular Reproduction and Development, 2013, 80, Fm i. | 2.0 | 0 |
| 110 | Editorialâ€sea urchin special issue. Genesis, 2014, 52, 157-157. | 1.6 | 0 |
| 111 | The causes of things. Methods in Cell Biology, 2019, 151, 49-54. | 1.1 | 0 |
| 112 | Analysis of neural activity with fluorescent protein biosensors. Methods in Cell Biology, 2019, 151, 519-526. | 1.1 | 0 |
| 113 | A Machine Vision Framework for Automated Localization of Microinjection Sites on Low-Contrast Single Adherent Cells. Lecture Notes in Computer Science, 2011, , 12-20. | 1.3 | 0 |
| 114 | Eph-Ephrin signaling and focal adhesion kinase regulate actomyosin-dependent apical constriction of ciliary band cells. Journal of Cell Science, 2014, 127, e1-e1. | 2.0 | 0 |