# Lee Niswander

List of Publications by Year
in descending order



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|---|---|---|---|
| 121 papers | 12,790 citations | 34016<br>52 h-index | 24179<br>110 g-index |
| 132 all docs | 132 docs citations | 132 times ranked | 12482 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Hedgehog signalling in the mouse requires intraflagellar transport proteins. Nature, 2003, 426, 83-87. | 13.7 | 1,260 |
| 2 | A positive feedback loop coordinates growth and patterning in the vertebrate limb. Nature, 1994, 371, 609-612. | 13.7 | 665 |
| 3 | FGF-4 replaces the apical ectodermal ridge and directs outgrowth and patterning of the limb. Cell, 1993, 75, 579-587. | 13.5 | 637 |
| 4 | Requirement for BMP Signaling in Interdigital Apoptosis and Scale Formation. Science, 1996, 272, 738-741. | 6.0 | 533 |
| 5 | Mouse intraflagellar transport proteins regulate both the activator and repressor functions of Gli transcription factors. Development (Cambridge), 2005, 132, 3103-3111. | 1.2 | 472 |
| 6 | Distinct roles of type I bone morphogenetic protein receptors in the formation and differentiation ofâ€‰cartilage. Genes and Development, 1997, 11, 2191-2203. | 2.7 | 465 |
| 7 | The Continuing Challenge of Understanding, Preventing, and Treating Neural Tube Defects. Science, 2013, 339, 1222002. | 6.0 | 375 |
| 8 | FGF-4 and BMP-2 have opposite effects on limb growth. Nature, 1993, 361, 68-71. | 13.7 | 371 |
| 9 | Î²-catenin activation is necessary and sufficient to specify the dorsal dermal fate in the mouse. Developmental Biology, 2006, 296, 164-176. | 0.9 | 348 |
| 10 | Interaction between the signaling molecules WNT7a and SHH during vertebrate limb development: Dorsal signals regulate anteroposterior patterning. Cell, 1995, 80, 939-947. | 13.5 | 312 |
| 11 | The coiled-coil domain containing protein CCDC40 is essential for motile cilia function and left-right axis formation. Nature Genetics, 2011, 43, 79-84. | 9.4 | 292 |
| 12 | Bone morphogenetic protein signalling and vertebrate nervous system development. Nature Reviews Neuroscience, 2005, 6, 945-954. | 4.9 | 285 |
| 13 | LDL-receptor-related protein 4 is crucial for formation of the neuromuscular junction. Development (Cambridge), 2006, 133, 4993-5000. | 1.2 | 282 |
| 14 | BMPs Are Required at Two Steps of Limb Chondrogenesis: Formation of Prechondrogenic Condensations and Their Differentiation into Chondrocytes. Developmental Biology, 2000, 219, 237-249. | 0.9 | 280 |
| 15 | Plzf regulates limb and axial skeletal patterning. Nature Genetics, 2000, 25, 166-172. | 9.4 | 269 |
| 16 | Homozygous WNT3 Mutation Causes Tetra-Amelia in a Large Consanguineous Family. American Journal of Human Genetics, 2004, 74, 558-563. | 2.6 | 262 |
| 17 | Pattern formation: old models out on a limb. Nature Reviews Genetics, 2003, 4, 133-143. | 7.7 | 220 |
| 18 | BMP signaling patterns the dorsal and intermediate neural tube via regulation of homeobox and helix-loop-helix transcription factors. Development (Cambridge), 2002, 129, 2459-2472. | 1.2 | 218 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | p38 and a p38-Interacting Protein Are Critical for Downregulation of E-Cadherin during Mouse Gastrulation. Cell, 2006, 125, 957-969. | 13.5 | 217 |
| 20 | Genetic, Epigenetic, and Environmental Contributions to Neural Tube Closure. Annual Review of Genetics, 2014, 48, 583-611. | 3.2 | 192 |
| 21 | Development of bat flight: Morphologic and molecular evolution of bat wing digits. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 6581-6586. | 3.3 | 184 |
| 22 | Inhibition of NF-Î°B activity results in disruption of the apical ectodermal ridge and aberrant limb morphogenesis. Nature, 1998, 392, 615-618. | 13.7 | 163 |
| 23 | Visualization of Cartilage Formation: Insight into Cellular Properties of Skeletal Progenitors and Chondrodysplasia Syndromes. Developmental Cell, 2007, 12, 931-941. | 3.1 | 154 |
| 24 | BMP controls proximodistal outgrowth, via induction of the apical ectodermal ridge, and dorsoventral patterning in the vertebrate limb. Development (Cambridge), 2001, 128, 4463-4474. | 1.2 | 154 |
| 25 | The PCP genes Celsr1 and Vangl2 are required for normal lung branching morphogenesis. Human Molecular Genetics, 2010, 19, 2251-2267. | 1.4 | 146 |
| 26 | A mouse model for Meckel syndrome reveals Mks1 is required for ciliogenesis and Hedgehog signaling. Human Molecular Genetics, 2009, 18, 4565-4575. | 1.4 | 141 |
| 27 | Coordinate regulation of neural tube patterning and proliferation by TGFÎ² and WNT activity. Developmental Biology, 2004, 274, 334-347. | 0.9 | 130 |
| 28 | Microcephaly disease gene Wdr62 regulates mitotic progression of embryonic neural stem cells and brain size. Nature Communications, 2014, 5, 3885. | 5.8 | 130 |
| 29 | Grainyhead-like 2 regulates neural tube closure and adhesion molecule expression during neural fold fusion. Developmental Biology, 2011, 353, 38-49. | 0.9 | 129 |
| 30 | Dynamic imaging of mammalian neural tube closure. Developmental Biology, 2010, 344, 941-947. | 0.9 | 125 |
| 31 | Mechanisms of tissue fusion during development. Development (Cambridge), 2012, 139, 1701-1711. | 1.2 | 123 |
| 32 | Interdigital webbing retention in bat wings illustrates genetic changes underlying amniote limb diversification. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15103-15107. | 3.3 | 122 |
| 33 | Embryonic staging system for the short-tailed fruit bat,Carollia perspicillata, a model organism for the mammalian orderChiroptera, based upon timed pregnancies in captive-bred animals. Developmental Dynamics, 2005, 233, 721-738. | 0.8 | 116 |
| 34 | Lin28 promotes the proliferative capacity of neural progenitor cells in brain development. Development (Cambridge), 2015, 142, 1616-1627. | 1.2 | 109 |
| 35 | FGF17b and FGF18 have different midbrain regulatory properties from FGF8b or activated FGF receptors. Development (Cambridge), 2003, 130, 6175-6185. | 1.2 | 107 |
| 36 | The ubiquitin ligase mLin41 temporally promotes neural progenitor cell maintenance through FGF signaling. Genes and Development, 2012, 26, 803-815. | 2.7 | 103 |

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|---|---|---|---|
| 37 | BMP signaling patterns the dorsal and intermediate neural tube via regulation of homeobox and helix-loop-helix transcription factors. Development (Cambridge), 2002, 129, 2459-72. | 1.2 | 100 |
| 38 | The flatiron mutation in mouse ferroportin acts as a dominant negative to cause ferroportin disease. Blood, 2007, 109, 4174-4180. | 0.6 | 93 |
| 39 | Phactr4 Regulates Neural Tube and Optic Fissure Closure by Controlling PP1-, Rb-, and E2F1-Regulated Cell-Cycle Progression. Developmental Cell, 2007, 13, 87-102. | 3.1 | 92 |
| 40 | Canonical Wnt signaling negatively regulates branching morphogenesis of the lung and lacrimal gland. Developmental Biology, 2005, 286, 270-286. | 0.9 | 91 |
| 41 | Gli3 and Plzf cooperate in proximal limb patterning at early stages of limb development. Nature, 2005, 436, 277-281. | 13.7 | 89 |
| 42 | C2cd3 is required for cilia formation and Hedgehog signaling in mouse. Development (Cambridge), 2008, 135, 4049-4058. | 1.2 | 84 |
| 43 | Expression ofslit-2 andslit-3 during chick development. Developmental Dynamics, 2001, 222, 301-307. | 0.8 | 82 |
| 44 | Interplay between the molecular signals that control vertebrate limb development. International Journal of Developmental Biology, 2002, 46, 877-81. | 0.3 | 78 |
| 45 | Folic acid supplementation can adversely affect murine neural tube closure and embryonic survival. Human Molecular Genetics, 2011, 20, 3678-3683. | 1.4 | 71 |
| 46 | Scribble is required for normal epithelial cellâ€“cell contacts and lumen morphogenesis in the mammalian lung. Developmental Biology, 2013, 373, 267-280. | 0.9 | 71 |
| 47 | <i>In toto</i> live imaging of mouse morphogenesis and new insights into neural tube closure. Development (Cambridge), 2013, 140, 226-236. | 1.2 | 66 |
| 48 | The Hectd1 ubiquitin ligase is required for development of the head mesenchyme and neural tube closure. Developmental Biology, 2007, 306, 208-221. | 0.9 | 63 |
| 49 | Phactr4 regulates directional migration of enteric neural crest through PP1, integrin signaling, and cofilin activity. Genes and Development, 2012, 26, 69-81. | 2.7 | 63 |
| 50 | The use of in ovo electroporation for the rapid analysis of neural-specific murine enhancers. Genesis, 2001, 29, 123-132. | 0.8 | 56 |
| 51 | Effect of FGF on Gene Expression in Chick Limb Bud Cells in Vivo and in Vitro. Developmental Biology, 1995, 171, 507-520. | 0.9 | 53 |
| 52 | Expression of a Constitutively Active Type I BMP Receptor Using a Retroviral Vector Promotes the Development of Adrenergic Cells in Neural Crest Cultures. Developmental Biology, 1998, 196, 107-118. | 0.9 | 53 |
| 53 | Plasmid-based short-hairpin RNA interference in the chicken embryo. Genesis, 2004, 39, 73-78. | 0.8 | 53 |
| 54 | Tissue morphogenesis and vascular stability require the Frem2 protein, product of the mouse myelencephalic blebs gene. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11746-11750. | 3.3 | 53 |

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|---|---|---|---|
| 55 | Using genomewide mutagenesis screens to identify the genes required for neural tube closure in the mouse. Birth Defects Research Part A: Clinical and Molecular Teratology, 2005, 73, 583-590. | 1.6 | 51 |
| 56 | Grainyhead-like 2 downstream targets act to suppress EMT during neural tube closure. Development (Cambridge), 2016, 143, 1192-204. | 1.2 | 51 |
| 57 | Molecular signaling in intervertebral disk development. Journal of Orthopaedic Research, 2005, 23, 1112-1119. | 1.2 | 47 |
| 58 | Defects in GPI biosynthesis perturb Cripto signaling during forebrain development in two new mouse models of holoprosencephaly. Biology Open, 2012, 1, 874-883. | 0.6 | 45 |
| 59 | Glutathione-S-transferase is present in a variety of microorganisms. Chemosphere, 1980, 9, 565-569. | 4.2 | 44 |
| 60 | Function of FGF-4 in limb development. Molecular Reproduction and Development, 1994, 39, 83-89. | 1.0 | 44 |
| 61 | The iron exporter ferroportin 1 is essential for development of the mouse embryo, forebrain patterning and neural tube closure. Development (Cambridge), 2010, 137, 3079-3088. | 1.2 | 44 |
| 62 | Multiparametric image analysis of lungâ€branching morphogenesis. Developmental Dynamics, 2013, 242, 622-637. | 0.8 | 43 |
| 63 | Gefitinib selectively inhibits tumor cell migration in EGFR-amplified human glioblastoma. Neuro-Oncology, 2013, 15, 1048-1057. | 0.6 | 40 |
| 64 | EGF Signaling Patterns the Feather Array by Promoting the Interbud Fate. Developmental Cell, 2003, 4, 231-240. | 3.1 | 39 |
| 65 | BMP Expression in Duck Interdigital Webbing: A Reanalysis. Science, 1997, 278, 305-305. | 6.0 | 38 |
| 66 | Limb mutants: what can they tell us about normal limb development?. Current Opinion in Genetics and Development, 1997, 7, 530-536. | 1.5 | 38 |
| 67 | Molecular mapping of albino deletions associated with early embryonic lethality in the mouse. Genomics, 1991, 9, 162-169. | 1.3 | 36 |
| 68 | Physical mapping of the albino-deletion complex in the mouse to localize alf/hsdr-1, a locus required for neonatal survival. Genomics, 1992, 14, 275-287. | 1.3 | 36 |
| 69 | Disruption of Scale Development byDelta-1Misexpression. Developmental Biology, 1998, 195, 70-74. | 0.9 | 36 |
| 70 | Novel Î±-tubulin mutation disrupts neural development and tubulin proteostasis. Developmental Biology, 2016, 409, 406-419. | 0.9 | 36 |
| 71 | Zinc deficiency causes neural tube defects through attenuation of p53 ubiquitylation. Development (Cambridge), 2018, 145, . | 1.2 | 35 |
| 72 | A unique missense allele of BAF155, a core BAF chromatin remodeling complex protein, causes neural tube closure defects in mice. Developmental Neurobiology, 2014, 74, 483-497. | 1.5 | 33 |

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|---|---|---|---|
| 73 | Kat2a and Kat2b Acetyltransferase Activity Regulates Craniofacial Cartilage and Bone Differentiation in Zebrafish and Mice. Journal of Developmental Biology, 2018, 6, 27. | 0.9 | 32 |
| 74 | Morphogenetic movements in the neural plate and neural tube: mouse. Wiley Interdisciplinary Reviews: Developmental Biology, 2014, 3, 59-68. | 5.9 | 31 |
| 75 | Intratumoral heterogeneity of endogenous tumor cell invasive behavior in human glioblastoma. Scientific Reports, 2018, 8, 18002. | 1.6 | 29 |
| 76 | The Evolutionary and Developmental Basis of Parallel Reduction in Mammalian Zeugopod Elements. American Naturalist, 2007, 169, 105-117. | 1.0 | 28 |
| 77 | Dlx genes integrate positive and negative signals during feather bud development. Developmental Biology, 2004, 265, 219-233. | 0.9 | 27 |
| 78 | Early Steps in Limb Patterning and Chondrogenesis. Novartis Foundation Symposium, 2008, 232, 23-43. | 1.2 | 27 |
| 79 | Dynamic behaviors of the non-neural ectoderm during mammalian cranial neural tube closure. Developmental Biology, 2016, 416, 279-285. | 0.9 | 26 |
| 80 | Cell polarity pathways converge and extend to regulate neural tube closure. Trends in Cell Biology, 2003, 13, 451-454. | 3.6 | 25 |
| 81 | The Activin signaling pathway promotes differentiation of dI3 interneurons in the spinal neural tube. Developmental Biology, 2005, 285, 1-10. | 0.9 | 25 |
| 82 | The <i>Ptch1<sup>DL</sup></i> mouse: A new model to study lambdoid craniosynostosis and basal cell nevus syndromeâ€associated skeletal defects. Genesis, 2013, 51, 677-689. | 0.8 | 25 |
| 83 | Defects in Stratum Corneum Desquamation Are the Predominant Effect of Impaired ABCA12 Function in a Novel Mouse Model of Harlequin Ichthyosis. PLoS ONE, 2016, 11, e0161465. | 1.1 | 25 |
| 84 | Genetic contribution of retinoid-related genes to neural tube defects. Human Mutation, 2018, 39, 550-562. | 1.1 | 24 |
| 85 | Partial cDNA sequence to a hamster gene corrects defect in Escherichia coli pyrB mutant.. Proceedings of the National Academy of Sciences of the United States of America, 1983, 80, 6897-6901. | 3.3 | 20 |
| 86 | Organization and Nucleotide Sequence of the 3â€² End of the Human CAD Gene. DNA and Cell Biology, 1990, 9, 667-676. | 0.9 | 20 |
| 87 | Nubp1 Is Required for Lung Branching Morphogenesis and Distal Progenitor Cell Survival in Mice. PLoS ONE, 2012, 7, e44871. | 1.1 | 19 |
| 88 | Chromosome jumping from flanking markers defines the minimal region for alf/hsdr-1 within the albino-deletion complex. Genomics, 1992, 14, 288-297. | 1.3 | 18 |
| 89 | Peripheral nervous system defects in a mouse model for peroxisomal biogenesis disorders. Developmental Biology, 2014, 395, 84-95. | 0.9 | 17 |
| 90 | An Injectable Reverse Thermal Gel for Minimally Invasive Coverage of Mouse Myelomeningocele. Journal of Surgical Research, 2019, 235, 227-236. | 0.8 | 17 |

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|---|---|---|---|
| 91 | Advances in the Care of Children with Spina Bifida. Advances in Pediatrics, 2014, 61, 33-74. | 0.5 | 16 |
| 92 | MEMO1 drives cranial endochondral ossification and palatogenesis. Developmental Biology, 2016, 415, 278-295. | 0.9 | 16 |
| 93 | Growth Factor Interactions in Limb Development. Annals of the New York Academy of Sciences, 1996, 785, 23-26. | 1.8 | 14 |
| 94 | A hypomorphic allele reveals an important role of <i>inturned</i> in mouse skeletal development. Developmental Dynamics, 2015, 244, 736-747. | 0.8 | 14 |
| 95 | Association between rare variants in specific functional pathways and human neural tube defects multiple subphenotypes. Neural Development, 2020, 15, 8. | 1.1 | 14 |
| 96 | Micronutrient imbalance and common phenotypes in neural tube defects. Genesis, 2021, 59, e23455. | 0.8 | 14 |
| 97 | Phactr4. Cell Adhesion and Migration, 2012, 6, 419-423. | 1.1 | 10 |
| 98 | Low folate concentration impacts mismatch repair deficiency in neural tube defects. Epigenomics, 2020, 12, 5-18. | 1.0 | 10 |
| 99 | Snx3 is important for mammalian neural tube closure via its role in canonical and non-canonical WNT signaling. Development (Cambridge), 2020, 147, . | 1.2 | 10 |
| 100 | Legs to wings and back again. Nature, 1999, 398, 751-752. | 13.7 | 8 |
| 101 | The developmental reduction of the marsupial coracoid: A case study in <i>Monodelphis domestica</i>. Journal of Morphology, 2010, 271, 769-776. | 0.6 | 8 |
| 102 | Does DNA methylation provide a link between folate and neural tube closure?. Epigenomics, 2018, 10, 1263-1265. | 1.0 | 8 |
| 103 | GCN5 acetylation is required for craniofacial chondrocyte maturation. Developmental Biology, 2020, 464, 24-34. | 0.9 | 8 |
| 104 | Potassium dependent rescue of a myopathy with core-like structures in mouse. ELife, 2015, 4, . | 2.8 | 8 |
| 105 | Expression of Genes on Human Chromosome 21. Annals of the New York Academy of Sciences, 1985, 450, 43-54. | 1.8 | 7 |
| 106 | ALC (adjacent to LMX1 in chick) is a novel dorsal limb mesenchyme marker. Gene Expression Patterns, 2003, 3, 735-741. | 0.3 | 7 |
| 107 | An explant muscle model to examine the refinement of the synaptic landscape. Journal of Neuroscience Methods, 2014, 238, 95-104. | 1.3 | 7 |
| 108 | Pathogenesis of neural tube defects: The regulation and disruption of cellular processes underlying neural tube closure. WIREs Mechanisms of Disease, 2022, 14, e1559. | 1.5 | 7 |

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| 109 | Zic2 is required for enteric nervous system development and neurite outgrowth: a mouse model of enteric hyperplasia and dysplasia. Neurogastroenterology and Motility, 2013, 25, 538-541. | 1.6 | 6 |
| 110 | Rectification of muscle and nerve deficits in paralyzed ryanodine receptor type 1 mutant embryos. Developmental Biology, 2015, 404, 76-87. | 0.9 | 6 |
| 111 | Loss of Grhl3 is correlated with altered cellular protrusions in the nonâ€neural ectoderm during neural tube closure. Developmental Dynamics, 2021, 250, 732-744. | 0.8 | 6 |
| 112 | Identification and localization of DNA alteration in Chinese hamster ovary cell mutants (Urd?) defective in the first three enzymes of de novo pyrimidine synthesis. Somatic Cell and Molecular Genetics, 1985, 11, 379-390. | 0.7 | 4 |
| 113 | Chapter 7 Methods in Avian Embryology Experimental and Molecular Manipulation of the Embryonic Chick Limb. Methods in Cell Biology, 2008, 87, 135-152. | 0.5 | 3 |
| 114 | MusMorph, a database of standardized mouse morphology data for morphometric meta-analyses. Scientific Data, 2022, 9, . | 2.4 | 3 |
| 115 | Forming and shaping the field of limb development: A tribute to Dr. John Saunders. Developmental Biology, 2017, 429, 373. | 0.9 | 1 |
| 116 | Editorial overview: Developmental mechanisms, patterning and evolution. Current Opinion in Genetics and Development, 2014, 27, v-vii. | 1.5 | 0 |
| 117 | Neural tube defects. , 2020, , 179-199. | | 0 |
| 118 | Developmental Basis of Congenital Limb Differences. , 2011, , 1917-1924. | | 0 |
| 119 | Exploration of the effects of Doublethumb on neural tube development (541.7). FASEB Journal, 2014, 28, 541.7. | 0.2 | 0 |
| 120 | A Recessive ENU Screen Identifies Memo as a Novel Gene Driving Palatogenesis and Cranial base Development. FASEB Journal, 2015, 29, 872.10. | 0.2 | 0 |
| 121 | Micronutrient Balance Related to Neural Tube Defects and Prevention. FASEB Journal, 2022, 36, . | 0.2 | 0 |