Robert O Heuckeroth

List of Publications by Year
in descending order

84	7,324	66343	64796
papers	citations	42 h-index	79 g-index

91	91	91	5637
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Neurturin, a relative of glial-cell-line-derived neurotrophic factor. Nature, 1996, 384, 467-470.	27.8	688
2	Persephin, a Novel Neurotrophic Factor Related to GDNF and Neurturin. Neuron, 1998, 20, 245-253.	8.1	460
3	GFRÎ±1-Deficient Mice Have Deficits in the Enteric Nervous System and Kidneys. Neuron, 1998, 21, 317-324.	8.1	443
4	TrnR2, a Novel Receptor That Mediates Neurturin and GDNF Signaling through Ret. Neuron, 1997, 18, 793-802.	8.1	333
5	Gene Targeting Reveals a Critical Role for Neurturin in the Development and Maintenance of Enteric, Sensory, and Parasympathetic Neurons. Neuron, 1999, 22, 253-263.	8.1	303
6	Artemin Is a Vascular-Derived Neurotropic Factor for Developing Sympathetic Neurons. Neuron, 2002, 35, 267-282.	8.1	294
7	Enteric nervous system development: migration, differentiation, and disease. American Journal of Physiology - Renal Physiology, 2013, 305, G1-G24.	3.4	277
8	RET signaling is essential for migration, axonal growth and axon guidance of developing sympathetic neurons. Development (Cambridge), 2001, 128, 3963-3974.	2.5	254
9	Protein N-myristoylation in Escherichia coli: reconstitution of a eukaryotic protein modification in bacteria.. Proceedings of the National Academy of Sciences of the United States of America, 1990, 87, 1506-1510.	7.1	249
10	GDNF availability determines enteric neuron number by controlling precursor proliferation. Development (Cambridge), 2003, 130, 2187-2198.	2.5	248
11	Neurturin and GDNF Promote Proliferation and Survival of Enteric Neuron and Glial Progenitorsin Vitro. Developmental Biology, 1998, 200, 116-129.	2.0	211
12	Neurturin shares receptors and signal transduction pathways with glial cell line-derived neurotrophic factor in sympathetic neurons. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 7018-7023.	7.1	201
13	Hirschsprung disease â€" integrating basic science and clinical medicine to improve outcomes. Nature Reviews Gastroenterology and Hepatology, 2018, 15, 152-167.	17.8	197
14	Disruption of the yeast N-myristoyl transferase gene causes recessive lethality. Science, 1989, 243, 796-800.	12.6	196
15	Unexpected Roles for the Second Brain: Enteric Nervous System as Master Regulator of Bowel Function. Annual Review of Physiology, 2019, 81, 235-259.	13.1	132
16	Anomalous development of the hepatobiliary system in theinv mouse. Hepatology, 1999, 30, 372-378.	7.3	128
17	Mice expressing a dominant-negative Ret mutation phenocopy human Hirschsprung disease and delineate a direct role of Ret in spermatogenesis. Development (Cambridge), 2004, 131, 5503-5513.	2.5	112
18	White paper on guidelines concerning enteric nervous system stem cell therapy for enteric neuropathies. Developmental Biology, 2016, 417, 229-251.	2.0	112

#	Article	IF	Citations
19	MicroRNAs Induce a Permissive Chromatin Environment that Enables Neuronal Subtype-Specific Reprogramming of Adult Human Fibroblasts. Cell Stem Cell, 2017, 21, 332-348.e9.	11.1	112
20	Neurturin-Deficient Mice Develop Dry Eye and Keratoconjunctivitis Sicca. , 2003, 44, 4223.		105
21	Building a second brain in the bowel. Journal of Clinical Investigation, 2015, 125, 899-907.	8.2	104
22	Vitamin A facilitates enteric nervous system precursor migration by reducing Pten accumulation. Development (Cambridge), 2010, 137, 631-640.	2.5	98
23	Mice lacking sister chromatid cohesion protein PDS5B exhibit developmental abnormalities reminiscent of Cornelia de Lange syndrome. Development (Cambridge), 2007, 134, 3191-3201.	2.5	94
24	Replication of human immunodeficiency virus 1 and Moloney murine leukemia virus is inhibited by different heteroatom-containing analogs of myristic acid.. Proceedings of the National Academy of Sciences of the United States of America, 1989, 86, 8655-8659.	7.1	93
25	BMP signaling regulates murine enteric nervous system precursor migration, neurite fasciculation, and patterning via altered Ncam1 polysialic acid addition. Developmental Biology, 2006, 299, 137-150.	2.0	85
26	The Timing and Location of Glial Cell Line-Derived Neurotrophic Factor Expression Determine Enteric Nervous System Structure and Function. Journal of Neuroscience, 2010, 30, 1523-1538.	3.6	79
27	PAI-1 deficiency reduces liver fibrosis after bile duct ligation in mice through activation of tPA. FEBS Letters, 2007, 581, 3098-3104.	2.8	76
28	Dosage Effects of Cohesin Regulatory Factor PDS5 on Mammalian Development: Implications for Cohesinopathies. PLoS ONE, 2009, 4, e5232.	2.5	74
29	GFRÎ±1 Expression in Cells Lacking RET Is Dispensable for Organogenesis and Nerve Regeneration. Neuron, 2004, 44, 623-636.	8.1	67
30	Glial Cell-Derived Neurotrophic Factor Induces Enteric Neurogenesis and Improves Colon Structure and Function in Mouse Models of Hirschsprung Disease. Gastroenterology, 2020, 159, 1824-1838.e17.	1.3	63
31	Enteric neuroblasts require the phosphatidylinositol 3-kinase/Akt/Forkhead pathway for GDNF-stimulated survival. Molecular and Cellular Neurosciences, 2005, 29, 107-119.	2.2	62
32	Differential gene expression and functional analysis implicate novel mechanisms in enteric nervous system precursor migration and neuritogenesis. Developmental Biology, 2006, 298, 259-271.	2.0	62
33	Retinoic acid regulates murine enteric nervous system precursor proliferation, enhances neuronal precursor differentiation, and reduces neurite growth in vitro. Developmental Biology, 2008, 320, 185-198.	2.0	62
34	Muscularis macrophage development in the absence of an enteric nervous system. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4696-4701.	7.1	61
35	The Pediatric Cell Atlas: Defining the Growth Phase of Human Development at Single-Cell Resolution. Developmental Cell, 2019, 49, 10-29.	7.0	57
36	Transcriptional profiling after bile duct ligation identifies PAI-1 as a contributor to cholestatic injury in mice. Hepatology, 2005, 42, 1099-1108.	7.3	56

#	Article	IF	Citations
37	scRNA-Seq Reveals New Enteric Nervous System Roles for GDNF, NRTN, and TBX3. Cellular and Molecular Gastroenterology and Hepatology, 2021, 11, 1548-1592.e1.	4.5	55
38	Hirschsprung-like disease is exacerbated by reduced de novo GMP synthesis. Journal of Clinical Investigation, 2013, 123, 4875-4887.	8.2	55
39	Intestinal Dysmotility Syndromes following Systemic Infection by Flaviviruses. Cell, 2018, 175, 1198-1212.e12.	28.9	53
40	Organotypic specificity of key RET adaptor-docking sites in the pathogenesis of neurocristopathies and renal malformations in mice. Journal of Clinical Investigation, 2010, 120, 778-790.	8.2	50
41	Altered membrane association of p60v-src and a murine 63-kDa N-myristoyl protein after incorporation of an oxygen-substituted analog of myristic acid.. Proceedings of the National Academy of Sciences of the United States of America, 1989, 86, 5262-5266.	7.1	48
42	Electron-transfer-induced photocyclization reactions of arene-iminium salt systems. Effects of cation-diradical deprotonation and desilylation on the nature and efficiencies of reaction pathways followed. Journal of the American Chemical Society, 1987, 109, 2738-2745.	13.7	46
43	Gene-environment interactions and the enteric nervous system: Neural plasticity and Hirschsprung disease prevention. Developmental Biology, 2016, 417, 188-197.	2.0	44
44	Arene-iminium salt electron-transfer photochemistry. Mechanistically interesting photoaddition processes. Journal of the American Chemical Society, 1987, 109, 2728-2737.	13.7	43
45	Neurturin signalling via GFRÎ±2 is essential for innervation of glandular but not muscle targets of sacral parasympathetic ganglion neurons. Molecular and Cellular Neurosciences, 2004, 25, 288-300.	2.2	43
46	Robust, 3-Dimensional Visualization of Human Colon Enteric Nervous System Without Tissue Sectioning. Gastroenterology, 2020, 158, 2221-2235.e5.	1.3	43
47	Ibuprofen slows migration and inhibits bowel colonization by enteric nervous system precursors in zebrafish, chick and mouse. Developmental Biology, 2016, 409, 473-488.	2.0	41
48	Functional analysis of protein N-myristoylation: metabolic labeling studies using three oxygen-substituted analogs of myristic acid and cultured mammalian cells provide evidence for protein-sequence-specific incorporation and analog-specific redistribution.. Proceedings of the National Academy of Sciences of the United States of America, 1990, 87, 8511-8515.	7.1	38
49	Protein Kinase CÂ and Glycogen Synthase Kinase-3Â Control Neuronal Polarity in Developing Rodent Enteric Neurons, whereas SMAD Specific E3 Ubiquitin Protein Ligase 1 Promotes Neurite Growth But Does Not Influence Polarity. Journal of Neuroscience, 2007, 27, 9458-9468.	3.6	36
50	Hepatocyte Growth Factor and MET Support Mouse Enteric Nervous System Development, the Peristaltic Response, and Intestinal Epithelial Proliferation in Response to Injury. Journal of Neuroscience, 2015, 35, 11543-11558.	3.6	34
51	Tissue-type plasminogen activator deficiency exacerbates cholestatic liver injury in mice. Hepatology, 2007, 45, 1527-1537.	7.3	30
52	Arene-iminium salt photochemistry. Dramatic effects of sequential electron-transfer-desilylation pathways on the nature and efficiency of photoaddition and photocyclization processes. Journal of the American Chemical Society, 1984, 106, 6439-6440.	13.7	25
53	Differential Regional and Subtype-Specific Vulnerability of Enteric Neurons to Mitochondrial Dysfunction. PLoS ONE, 2011, 6, e27727.	2.5	25
54	Visceral myopathy: clinical syndromes, genetics, pathophysiology, and fall of the cytoskeleton. American Journal of Physiology - Renal Physiology, 2021, 320, G919-G935.	3.4	24

#	Article	IF	Citations
55	Sympathetic Input to Multiple Cell Types in Mouse and Human Colon Produces Region-Specific Responses. Gastroenterology, 2021, 160, 1208-1223.e4.	1.3	23
56	Retinaldehyde dehydrogenase enzymes regulate colon enteric nervous system structure and function. Developmental Biology, 2013, 381, 28-37.	2.0	21
57	Neurturin, a Novel Neurotrophic Factor, Is Localized to Mouse Chromosome 17 and Human Chromosome 19p13.3. Genomics, 1997, 44, 137-140.	2.9	20
58	Reduced endothelin converting enzyme-1 and endothelin-3 mRNA in the developing bowel of male mice may increase expressivity and penetrance of Hirschsprung diseaseâ€“like distal intestinal aganglionosis. Developmental Dynamics, 2007, 236, 106-117.	1.8	20
59	Hypothyroidism Is a Rare Cause of Isolated Constipation. Journal of Pediatric Gastroenterology and Nutrition, 2012, 54, 285-287.	1.8	19
60	Neural crest requires Impdh 2 for development of the enteric nervous system, great vessels, and craniofacial skeleton. Developmental Biology, 2016, 409, 152-165.	2.0	19
61	Ret heterozygous mice have enhanced intestinal adaptation after massive small bowel resection. American Journal of Physiology - Renal Physiology, 2012, 302, G1143-G1150.	3.4	15
62	Loss of Tbx3 in murine neural crest reduces enteric glia and causes cleft palate, but does not influence heart development or bowel transit. Developmental Biology, 2018, 444, S337-S351.	2.0	15
63	Serum Markers May Distinguish Biliary Atresia From Other Forms of Neonatal Cholestasis. Journal of Pediatric Gastroenterology and Nutrition, 2010, 50, 411-416.	1.8	15
64	Getting to the guts of enteric nervous system development. Development (Cambridge), 2006, 133, 2287-2290.	2.5	14
65	Augmentation of the ascending component of the peristaltic reflex and substance P release by glial cell line-derived neurotrophic factor. Neurogastroenterology and Motility, 2010, 22, 779-786.	3.0	14
66	Hirschsprungâ€™s disease, Down syndrome, and missing heritability: too much collagen slows migration. Journal of Clinical Investigation, 2015, 125, 4323-4326.	8.2	14
67	Vascular and neural stem cells in the gut: do they need each other?. Histochemistry and Cell Biology, 2015, 143, 397-410.	1.7	12
68	Dlx1/2 mice have abnormal enteric nervous system function. JCI Insight, 2020, 5, .	5.0	11
69	Finding Your Way to the End. Neuron, 2003, 40, 871-873.	8.1	10
70	Pseudo-obstructionâ€“inducing ACTG2R257C alters actin organization and function. JCI Insight, 2020, 5, .	5.0	10
71	Retinoblastoma protein prevents enteric nervous system defects and intestinal pseudo-obstruction. Journal of Clinical Investigation, 2013, 123, 5152-5164.	8.2	10
72	Down syndrome mouse models have an abnormal enteric nervous system. JCI Insight, 2019, 4, .	5.0	9

#	Article	IF	Citations
73	A Human Yeast Artificial Chromosome Containing the Multiple Endocrine Neoplasia Type 2B Ret Mutation Does Not Induce Medullary Thyroid Carcinoma but Does Support the Growth of Kidneys and Partially Rescues Enteric Nervous System Development in Ret-Deficient Mice. American Journal of Pathology, 2005, 166, 265-274.	3.8	8
74	Stem cells make the bowel nervous. Nature, 2016, 531, 44-45.	27.8	8
75	The EXTrauterine Environment for Neonatal Development Supports Normal Intestinal Maturation and Development. Cellular and Molecular Gastroenterology and Hepatology, 2020, 10, 623-637.	4.5	8
76	Even When You Know Everything, There Is Still More toÂLearnÂAbout Hirschsprung Disease. Gastroenterology, 2018, 155, 1681-1684.	1.3	7
77	Cell-autonomous retinoic acid receptor signaling has stage-specific effects on mouse enteric nervous system. JCI Insight, 2021, 6, .	5.0	6
78	Hirschsprung Disease. , 2013, , 271-283.		3
79	Nerves Make the Bowel Happy, Even When the Enteric Nervous System Is Missing!. Cellular and Molecular Gastroenterology and Hepatology, 2021, 12, 785-786.	4.5	2
80	Hirschsprung Disease. , 2017, , 291-302.		2
81	T1735 The Role of RALDH1, RALDH2, and RALDH3 in Enteric Nervous System Development. Gastroenterology, 2010, 138, S-567.	1.3	0
82	Newly Identified Enteric Nervous System Precursors in the Mesentery Make One Skip, But Not For Joy!. Cellular and Molecular Gastroenterology and Hepatology, 2021, 12, 378-379.	4.5	0
83	Vitamin A facilitates enteric nervous system precursor migration by reducing Pten accumulation. Journal of Cell Science, 2010, 123, e1-e1.	2.0	0
84	IDIOTYPES AND ANTI-IDIOTYPES11This work was supported by NIH grants AI-15926, CA-09118, GM-02016 and GM-07157.. , 1985, , 253-265.		0