

# Ravi V Bellamkonda

## List of Publications by Year in descending order

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125  
papers

11,304  
citations

25034

57  
h-index

29157

104  
g-index

131  
all docs

131  
docs citations

131  
times ranked

13413  
citing authors

#	ARTICLE	IF	CITATIONS
1	Immuno-suppressive hydrogels enhance allogeneic MSC survival after transplantation in the injured brain. <i>Biomaterials</i> , 2021, 266, 120419.	11.4	34
2	Engineered glycomaterial implants orchestrate large-scale functional repair of brain tissue chronically after severe traumatic brain injury. <i>Science Advances</i> , 2021, 7, .	10.3	14
3	Enriching neural stem cell and anti-inflammatory glial phenotypes with electrical stimulation after traumatic brain injury in male rats. <i>Journal of Neuroscience Research</i> , 2021, 99, 1864-1884.	2.9	11
4	Microfabrication, Coil Characterization, and Hermetic Packaging of Millimeter-Sized Free-Floating Neural Probes. <i>IEEE Sensors Journal</i> , 2021, 21, 13837-13848.	4.7	5
5	Neuromechanobiology: An Expanding Field Driven by the Force of Greater Focus. <i>Advanced Healthcare Materials</i> , 2021, 10, e2100102.	7.6	14
6	Neural Tissue Engineering. , 2020, , 639-667.		4
7	Engineering Controlled Peritumoral Inflammation to Constrain Brain Tumor Growth. <i>Advanced Healthcare Materials</i> , 2019, 8, e1801076.	7.6	5
8	Peripheral Nerve Regeneration. , 2019, , 1223-1236.		23
9	The impact of modulating the blood-brain barrier on the electrophysiological and histological outcomes of intracortical electrodes. <i>Journal of Neural Engineering</i> , 2019, 16, 046005.	3.5	6
10	Electrotaxis of Glioblastoma and Medulloblastoma Spheroidal Aggregates. <i>Scientific Reports</i> , 2019, 9, 5309.	3.3	22
11	Discovery of Lipidome Alterations Following Traumatic Brain Injury via High-Resolution Metabolomics. <i>Journal of Proteome Research</i> , 2018, 17, 2131-2143.	3.7	44
12	Therapeutic efficacy of microtube-embedded chondroitinase ABC in a canine clinical model of spinal cord injury. <i>Brain</i> , 2018, 141, 1017-1027.	7.6	61
13	Cerivastatin Nanoliposome as a Potential Disease Modifying Approach for the Treatment of Pulmonary Arterial Hypertension. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2018, 366, 66-74.	2.5	13
14	<i>In Vitro</i> Transcribed mRNA Vaccines with Programmable Stimulation of Innate Immunity. <i>Bioconjugate Chemistry</i> , 2018, 29, 3072-3083.	3.6	21
15	Correlation of mRNA Expression and Signal Variability in Chronic Intracortical Electrodes. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018, 6, 26.	4.1	22
16	Bacterial Carriers for Glioblastoma Therapy. <i>Molecular Therapy - Oncolytics</i> , 2017, 4, 1-17.	4.4	26
17	Kilohertz frequency nerve block enhances anti-inflammatory effects of vagus nerve stimulation. <i>Scientific Reports</i> , 2017, 7, 39810.	3.3	51
18	Chondroitin Sulfate Glycosaminoglycan Matrices Promote Neural Stem Cell Maintenance and Neuroprotection Post-Traumatic Brain Injury. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 420-430.	5.2	44

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19	Engineering challenges for brain tumor immunotherapy. <i>Advanced Drug Delivery Reviews</i> , 2017, 114, 19-32.	13.7	62
20	Immunoengineering nerve repair. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E5077-E5084.	7.1	65
21	Enrichment of endogenous fractalkine and anti-inflammatory cells via aptamer-functionalized hydrogels. <i>Biomaterials</i> , 2017, 142, 52-61.	11.4	31
22	Response reliability observed with voltage-sensitive dye imaging of cortical layer 2/3: the probability of activation hypothesis. <i>Journal of Neurophysiology</i> , 2016, 115, 2456-2469.	1.8	11
23	A regenerative microchannel device for recording multiple single-unit action potentials in awake, ambulatory animals. <i>European Journal of Neuroscience</i> , 2016, 43, 474-485.	2.6	20
24	Strategies for modulating innate immune activation and protein production of in vitro transcribed mRNAs. <i>Journal of Materials Chemistry B</i> , 2016, 4, 1619-1632.	5.8	17
25	Extracellular matrix-based intracortical microelectrodes: Toward a microfabricated neural interface based on natural materials. <i>Microsystems and Nanoengineering</i> , 2015, 1, .	7.0	46
26	Nanocarrier-Mediated Inhibition of Macrophage Migration Inhibitory Factor Attenuates Secondary Injury after Spinal Cord Injury. <i>ACS Nano</i> , 2015, 9, 1492-1505.	14.6	75
27	Microchannel-based regenerative scaffold for chronic peripheral nerve interfacing in amputees. <i>Biomaterials</i> , 2015, 41, 151-165.	11.4	48
28	Protease-degradable PEG-maleimide coating with on-demand release of IL-1Ra to improve tissue response to neural electrodes. <i>Biomaterials</i> , 2015, 44, 55-70.	11.4	55
29	Enhanced therapeutic neovascularization by CD31-expressing cells and embryonic stem cell-derived endothelial cells engineered with chitosan hydrogel containing VEGF-releasing microtubes. <i>Biomaterials</i> , 2015, 63, 158-167.	11.4	64
30	Chondroitin Sulfate Glycosaminoglycan Hydrogels Create Endogenous Niches for Neural Stem Cells. <i>Bioconjugate Chemistry</i> , 2015, 26, 2336-2349.	3.6	62
31	A sensor web for neurons. <i>Nature Materials</i> , 2015, 14, 1190-1191.	27.5	20
32	Evans blue nanocarriers visually demarcate margins of invasive gliomas. <i>Drug Delivery and Translational Research</i> , 2015, 5, 116-124.	5.8	10
33	Characterization of a composite injury model of severe lower limb bone and nerve trauma. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2014, 8, 432-441.	2.7	10
34	A Perspective on Immunomodulation and Tissue Repair. <i>Annals of Biomedical Engineering</i> , 2014, 42, 338-351.	2.5	94
35	Guiding intracortical brain tumour cells to an extracortical cytotoxic hydrogel using aligned polymeric nanofibres. <i>Nature Materials</i> , 2014, 13, 308-316.	27.5	128
36	Hydrogels as Carriers for Stem Cell Transplantation. <i>IEEE Transactions on Biomedical Engineering</i> , 2014, 61, 1474-1481.	4.2	26

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37	PDMS microchannel scaffolds for neural interfaces with the peripheral nervous system. , 2014, , .		4
38	Host response to microgel coatings on neural electrodes implanted in the brain. Journal of Biomedical Materials Research - Part A, 2014, 102, 1486-1499.	4.0	46
39	The effect of inflammatory cell-derived MCP-1 loss on neuronal survival during chronic neuroinflammation. Biomaterials, 2014, 35, 6698-6706.	11.4	48
40	Noninvasive Imaging of Peripheral Nerves. Cells Tissues Organs, 2014, 200, 69-77.	2.3	38
41	Chondroitin Sulfate Glycosaminoglycans for CNS Homeostasis-Implications for Material Design. Current Medicinal Chemistry, 2014, 21, 4257-4281.	2.4	7
42	Relationship between intracortical electrode design and chronic recording function. Biomaterials, 2013, 34, 8061-8074.	11.4	220
43	Neuronal Tissue Engineering. , 2013, , 1291-1306.		7
44	Regenerative Scaffold Electrodes for Peripheral Nerve Interfacing. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2013, 21, 554-566.	4.9	40
45	The impact of chronic blood-brain barrier breach on intracortical electrode function. Biomaterials, 2013, 34, 4703-4713.	11.4	239
46	Anti-Invasive Adjuvant Therapy with Imipramine Blue Enhances Chemotherapeutic Efficacy Against Glioma. Science Translational Medicine, 2012, 4, 127ra36.	12.4	102
47	Materials for neural interfaces. MRS Bulletin, 2012, 37, 557-561.	3.5	29
48	Photocrosslinkable chitosan based hydrogels for neural tissue engineering. Soft Matter, 2012, 8, 1964-1976.	2.7	115
49	Effect of modulating macrophage phenotype on peripheral nerve repair. Biomaterials, 2012, 33, 8793-8801.	11.4	273
50	Multifunctional Nanoparticles for Personalized Medicine. Nanostructure Science and Technology, 2012, , 277-293.	0.1	0
51	The upregulation of specific interleukin (IL) receptor antagonists and paradoxical enhancement of neuronal apoptosis due to electrode induced strain and brain micromotion. Biomaterials, 2012, 33, 5983-5996.	11.4	92
52	Regenerative microchannel electrode array for peripheral nerve interfacing. , 2011, , .		5
53	Remote Triggered Release of Doxorubicin in Tumors by Synergistic Application of Thermosensitive Liposomes and Gold Nanorods. ACS Nano, 2011, 5, 4919-4926.	14.6	221
54	Nanoparticles with targeting, triggered release, and imaging functionality for cancer applications. Soft Matter, 2011, 7, 839-856.	2.7	113

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55	Toward a Convergence of Regenerative Medicine, Rehabilitation, and Neuroprosthetics. Journal of Neurotrauma, 2011, 28, 2329-2347.	3.4	14
56	Evaluation of Tumor Microenvironment in an Animal Model using a Nanoparticle Contrast Agent in Computed Tomography Imaging. Academic Radiology, 2011, 18, 20-30.	2.5	84
57	Peripheral Nerve Regeneration. , 2011, , 1047-1062.		1
58	Sustained Delivery of Activated Rho GTPases and BDNF Promotes Axon Growth in CSPG-Rich Regions Following Spinal Cord Injury. PLoS ONE, 2011, 6, e16135.	2.5	65
59	Overcoming Endogenous Constraints on Neuronal Regeneration. IEEE Transactions on Biomedical Engineering, 2011, 58, 1900-1906.	4.2	15
60	Advances in Bioengineered Conduits for Peripheral Nerve Regeneration. Atlas of the Oral and Maxillofacial Surgery Clinics of North America, 2011, 19, 119-130.	1.0	28
61	Highly-compliant, microcable neuroelectrodes fabricated from thin-film gold and PDMS. Biomedical Microdevices, 2011, 13, 361-373.	2.8	59
62	The use of lipid microtubes as a novel slow-release delivery system for laryngeal injection. Laryngoscope, 2011, 121, 1237-1243.	2.0	7
63	Targeted downregulation of <i>N-acetylgalactosamine 4-sulfate 6-O-sulfotransferase</i> significantly mitigates chondroitin sulfate proteoglycan-mediated inhibition. Glia, 2011, 59, 981-996.	4.9	44
64	Role of fibronectin in topographical guidance of neurite extension on electrospun fibers. Biomaterials, 2011, 32, 3958-3968.	11.4	105
65	Slow-release nanoparticle-encapsulated delivery system for laryngeal injection. Laryngoscope, 2010, 120, 988-994.	2.0	14
66	Sustained VEGF delivery via PLGA nanoparticles promotes vascular growth. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 298, H1959-H1965.	3.2	128
67	Topography, Cell Response, and Nerve Regeneration. Annual Review of Biomedical Engineering, 2010, 12, 203-231.	12.3	457
68	A conformable microelectrode array (cMEA) with integrated electronics for peripheral nerve interfacing. , 2010, , .		7
69	Sustained delivery of thermostabilized chABC enhances axonal sprouting and functional recovery after spinal cord injury. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 3340-3345.	7.1	281
70	Imaging Nanoprobe for Prediction of Outcome of Nanoparticle Chemotherapy by Using Mammography. Radiology, 2009, 250, 398-406.	7.3	96
71	Nanomaterials for Neural Interfaces. Advanced Materials, 2009, 21, 3970-4004.	21.0	460
72	Selective Targeting of Nanocarriers to Neutrophils and Monocytes. Annals of Biomedical Engineering, 2009, 37, 1984-1992.	2.5	27

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73	Sustained release of BMP-2 in a lipid-based microtube vehicle. <i>Acta Biomaterialia</i> , 2009, 5, 23-28.	8.3	40
74	Masking and triggered unmasking of targeting ligands on nanocarriers to improve drug delivery to brain tumors. <i>Biomaterials</i> , 2009, 30, 3986-3995.	11.4	122
75	Nanoparticle-mediated local delivery of methylprednisolone after spinal cord injury. <i>Biomaterials</i> , 2009, 30, 2582-2590.	11.4	181
76	Thin-film enhanced nerve guidance channels for peripheral nerve repair. <i>Biomaterials</i> , 2009, 30, 3834-3846.	11.4	122
77	Implanted Neural Interfaces: Biochallenges and Engineered Solutions. <i>Annual Review of Biomedical Engineering</i> , 2009, 11, 1-24.	12.3	484
78	Implanted neural electrodes cause chronic, local inflammation that is correlated with local neurodegeneration. <i>Journal of Neural Engineering</i> , 2009, 6, 056003.	3.5	404
79	Tumor Vascular Permeability to a Nanoprobe Correlates to Tumor-Specific Expression Levels of Angiogenic Markers. <i>PLoS ONE</i> , 2009, 4, e5843.	2.5	64
80	Rational identification of a novel peptide for targeting nanocarriers to 9L glioma. <i>Journal of Biomedical Materials Research - Part A</i> , 2008, 87A, 728-738.	4.0	7
81	Differences between the effect of anisotropic and isotropic laminin and nerve growth factor presenting scaffolds on nerve regeneration across long peripheral nerve gaps. <i>Biomaterials</i> , 2008, 29, 33-46.	11.4	229
82	Spatial distribution and acute anti-inflammatory effects of Methylprednisolone after sustained local delivery to the contused spinal cord. <i>Biomaterials</i> , 2008, 29, 1967-1975.	11.4	134
83	Multifunctional nanocarriers for mammographic quantification of tumor dosing and prognosis of breast cancer therapy. <i>Biomaterials</i> , 2008, 29, 4815-4822.	11.4	58
84	The role of aligned polymer fiber-based constructs in the bridging of long peripheral nerve gaps. <i>Biomaterials</i> , 2008, 29, 3117-3127.	11.4	402
85	Biomaterials for the central nervous system. <i>Journal of the Royal Society Interface</i> , 2008, 5, 957-975.	3.4	205
86	MRI mediated, non-invasive tracking of intratumoral distribution of nanocarriers in rat glioma. <i>Nanotechnology</i> , 2008, 19, 315101.	2.6	18
87	Peripheral Nerve Regeneration. , 2008, , 1270-1285.		4
88	A regenerative electrode scaffold for peripheral nerve interfacing. , 2007, , .		5
89	Decreased circulation time offsets increased efficacy of PEGylated nanocarriers targeting folate receptors of glioma. <i>Nanotechnology</i> , 2007, 18, 385101.	2.6	91
90	Acute spatiotemporal changes in neuronal density surrounding microelectrode arrays implanted in rat motor cortex. , 2007, , .		2

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91	Extraction Force and Cortical Tissue Reaction of Silicon Microelectrode Arrays Implanted in the Rat Brain. IEEE Transactions on Biomedical Engineering, 2007, 54, 1097-1107.	4.2	44
92	Dexamethasone-coated neural probes elicit attenuated inflammatory response and neuronal loss compared to uncoated neural probes. Brain Research, 2007, 1148, 15-27.	2.2	281
93	A Liposomal Nanoscale Contrast Agent for Preclinical CT in Mice. American Journal of Roentgenology, 2006, 186, 300-307.	2.2	226
94	In situ gelling hydrogels for conformal repair of spinal cord defects, and local delivery of BDNF after spinal cord injury. Biomaterials, 2006, 27, 497-504.	11.4	274
95	Peripheral nerve regeneration: An opinion on channels, scaffolds and anisotropy. Biomaterials, 2006, 27, 3515-8.	11.4	305
96	A dual-ligand approach for enhancing targeting selectivity of therapeutic nanocarriers. Journal of Controlled Release, 2006, 114, 277-287.	9.9	212
97	Anisotropic scaffolds facilitate enhanced neurite extension in vitro. Journal of Biomedical Materials Research - Part A, 2006, 78A, 213-221.	4.0	105
98	Long-circulating liposomal contrast agents for magnetic resonance imaging. Magnetic Resonance in Medicine, 2006, 55, 1023-1029.	3.0	79
99	Nanoscale laminin coating modulates cortical scarring response around implanted silicon microelectrode arrays. Journal of Neural Engineering, 2006, 3, 316-326.	3.5	158
100	Nano- and Micro-Technology to Spatially and Temporally Control Proteins for Neural Regeneration. , 2006, , 3-22.		0
101	Preparation of in vivo cleavable agglomerated liposomes suitable for modulated pulmonary drug delivery. Journal of Controlled Release, 2005, 103, 159-175.	9.9	51
102	Folate targeting of drug carriers: A mathematical model. Journal of Controlled Release, 2005, 104, 113-128.	9.9	91
103	Controlled release of anti-inflammatory agent $\beta$ -MSH from neural implants. Journal of Controlled Release, 2005, 106, 309-318.	9.9	109
104	Nanoscale neuro-integrative coatings for neural implants. Biomaterials, 2005, 26, 2983-2990.	11.4	142
105	Sustained in Vivo Gene Delivery from Agarose Hydrogel Prolongs Nonviral Gene Expression in Skin. Tissue Engineering, 2005, 11, 546-555.	4.6	43
106	CS-4,6 is differentially upregulated in glial scar and is a potent inhibitor of neurite extension. Molecular and Cellular Neurosciences, 2005, 29, 545-558.	2.2	152
107	Biomechanical analysis of silicon microelectrode-induced strain in the brain. Journal of Neural Engineering, 2005, 2, 81-89.	3.5	239
108	Lipid Microtubules as Sustained Delivery Vehicles for Proteins and Nucleic Acids. ACS Symposium Series, 2004, , 85-97.	0.5	0

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109	Modulation of Rho GTPase activity alleviates chondroitin sulfate proteoglycan-dependent inhibition of neurite extension. <i>Journal of Neuroscience Research</i> , 2004, 77, 299-307.	2.9	66
110	Sustained release of plasmid DNA using lipid microtubules and agarose hydrogel. <i>Journal of Controlled Release</i> , 2003, 88, 321-331.	9.9	88
111	Controlled targeting of liposomal doxorubicin via the folate receptor in vitro. <i>Journal of Controlled Release</i> , 2003, 92, 49-67.	9.9	268
112	Long-Residence-Time Nano-Scale Liposomal Iohexol for X-ray-Based Blood Pool Imaging. <i>Academic Radiology</i> , 2003, 10, 475-483.	2.5	98
113	Tissue-Engineered Scaffolds Are Effective Alternatives to Autografts for Bridging Peripheral Nerve Gaps. <i>Tissue Engineering</i> , 2003, 9, 421-430.	4.6	173
114	Cationic lipid-mediated transfection of bovine aortic endothelial cells inhibits their attachment. <i>Journal of Biomedical Materials Research Part B</i> , 2002, 60, 405-410.	3.1	7
115	Isolation and Purification of Canine Adipose Microvascular Endothelial Cells. <i>Microvascular Research</i> , 2001, 61, 220-226.	2.5	17
116	Dorsal root ganglia neurite extension is inhibited by mechanical and chondroitin sulfate-rich interfaces. <i>Journal of Neuroscience Research</i> , 2001, 66, 303-310.	2.9	89
117	Lipid-based microtubular drug delivery vehicles. <i>Journal of Controlled Release</i> , 2001, 71, 141-152.	9.9	86
118	Targeted drug delivery to C6 glioma by transferrin-coupled liposomes. <i>Journal of Biomedical Materials Research Part B</i> , 2000, 51, 10-14.	3.1	109
119	The polarity and magnitude of ambient charge influences three-dimensional neurite extension from DRGs. <i>Journal of Biomedical Materials Research Part B</i> , 2000, 51, 510-519.	3.1	50
120	eNOS-Overexpressing Endothelial Cells Inhibit Platelet Aggregation and Smooth Muscle Cell Proliferation in Vitro. <i>Tissue Engineering</i> , 2000, 6, 241-251.	4.6	56
121	Targeted drug delivery to C6 glioma by transferrin-coupled liposomes. <i>Journal of Biomedical Materials Research Part B</i> , 2000, 51, 10-14.	3.1	2
122	The polarity and magnitude of ambient charge influences three-dimensional neurite extension from DRGs. <i>Journal of Biomedical Materials Research Part B</i> , 2000, 51, 510-519.	3.1	1
123	Characterization and Analysis of Highly Hydrated, Three Dimensional Cell-Matrix Constructs. <i>Microscopy and Microanalysis</i> , 1999, 5, 388-389.	0.4	0
124	A Laminin and Nerve Growth Factor-Laden Three-Dimensional Scaffold for Enhanced Neurite Extension. <i>Tissue Engineering</i> , 1999, 5, 291-304.	4.6	181
125	The influence of physical structure and charge on neurite extension in a 3D hydrogel scaffold. <i>Journal of Biomaterials Science, Polymer Edition</i> , 1998, 9, 1049-1069.	3.5	168