Viviana Gradinaru

List of Publications by Year
in descending order

86 papers	22,263 citations	39113 52 h-index	56606 87 g-index
107 all docs	107 docs citations	107 times ranked	30734 citing authors

#	Article	IF	Citations
1	Gut Microbiota Regulate Motor Deficits and Neuroinflammation in a Model of Parkinsonâ€™s Disease. Cell, 2016, 167, 1469-1480.e12.	13.5	2,399
2	Structural and molecular interrogation of intact biological systems. Nature, 2013, 497, 332-337.	13.7	1,765
3	Optical Deconstruction of Parkinsonian Neural Circuitry. Science, 2009, 324, 354-359.	6.0	1,385
4	Amygdala circuitry mediating reversible and bidirectional control of anxiety. Nature, 2011, 471, 358-362.	13.7	1,073
5	Engineered AAVs for efficient noninvasive gene delivery to the central and peripheral nervous systems. Nature Neuroscience, 2017, 20, 1172-1179.	7.1	927
6	Molecular and Cellular Approaches for Diversifying and Extending Optogenetics. Cell, 2010, 141, 154-165.	13.5	919
7	Optogenetic interrogation of neural circuits: technology for probing mammalian brain structures. Nature Protocols, 2010, 5, 439-456.	5.5	895
8	Single-Cell Phenotyping within Transparent Intact Tissue through Whole-Body Clearing. Cell, 2014, 158, 945-958.	13.5	833
9	Ultrafast neuronal imaging of dopamine dynamics with designed genetically encoded sensors. Science, 2018, 360, .	6.0	773
10	Cre-dependent selection yields AAV variants for widespread gene transfer to the adult brain. Nature Biotechnology, 2016, 34, 204-209.	9.4	727
11	Principles for applying optogenetic tools derived from direct comparative analysis of microbial opsins. Nature Methods, 2012, 9, 159-172.	9.0	666
12	Global and local fMRI signals driven by neurons defined optogenetically by type and wiring. Nature, 2010, 465, 788-792.	13.7	659
13	Negative feedback control of neuronal activity by microglia. Nature, 2020, 586, 417-423.	13.7	520
14	Dynamics of Retrieval Strategies for Remote Memories. Cell, 2011, 147, 678-689.	13.5	481
15	eNpHR: a Natronomonas halorhodopsin enhanced for optogenetic applications. Brain Cell Biology, 2008, 36, 129-139.	3.5	454
16	Targeting and Readout Strategies for Fast Optical Neural Control<i>In Vitro</i>and<i>In Vivo</i>. Journal of Neuroscience, 2007, 27, 14231-14238.	1.7	450
17	Cholinergic Interneurons Control Local Circuit Activity and Cocaine Conditioning. Science, 2010, 330, 1677-1681.	6.0	417
18	Tissue clearing and its applications inÂneuroscience. Nature Reviews Neuroscience, 2020, 21, 61-79.	4.9	350

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19	LRP1 is a master regulator of tau uptake and spread. Nature, 2020, 580, 381-385.	13.7	326
20	Global Representations of Goal-Directed Behavior in Distinct Cell Types of Mouse Neocortex. Neuron, 2017, 94, 891-907.e6.	3.8	316
21	Regional glutamine deficiency in tumours promotes dedifferentiation through inhibition of histoneÂdemethylation. Nature Cell Biology, 2016, 18, 1090-1101.	4.6	291
22	Bioelectronic medicines: a research roadmap. Nature Reviews Drug Discovery, 2014, 13, 399-400.	21.5	283
23	A gut bacterial amyloid promotes Î±-synuclein aggregation and motor impairment in mice. ELife, 2020, 9, .	2.8	251
24	Gut-seeded Î±-synuclein fibrils promote gut dysfunction and brain pathology specifically in aged mice. Nature Neuroscience, 2020, 23, 327-336.	7.1	247
25	Systemic AAV vectors for widespread and targeted gene delivery in rodents. Nature Protocols, 2019, 14, 379-414.	5.5	235
26	Whole-body tissue stabilization and selective extractions via tissue-hydrogel hybrids for high-resolution intact circuit mapping and phenotyping. Nature Protocols, 2015, 10, 1860-1896.	5.5	234
27	The Neuropeptide Tac2 Controls a Distributed Brain State Induced by Chronic Social Isolation Stress. Cell, 2018, 173, 1265-1279.e19.	13.5	211
28	Leptin regulates the reward value of nutrient. Nature Neuroscience, 2011, 14, 1562-1568.	7.1	201
29	Dorsal Raphe Dopamine Neurons Modulate Arousal and Promote Wakefulness by Salient Stimuli. Neuron, 2017, 94, 1205-1219.e8.	3.8	201
30	Single-molecule RNA detection at depth via hybridization chain reaction and tissue hydrogel embedding and clearing. Development (Cambridge), 2016, 143, 2862-7.	1.2	174
31	The Jellyfish Cassiopea Exhibits a Sleep-like State. Current Biology, 2017, 27, 2984-2990.e3.	1.8	171
32	Cholinergic Mesopontine Signals Govern Locomotion and Reward through Dissociable Midbrain Pathways. Neuron, 2016, 90, 333-347.	3.8	168
33	AAV capsid variants with brain-wide transgene expression and decreased liver targeting after intravenous delivery in mouse and marmoset. Nature Neuroscience, 2022, 25, 106-115.	7.1	162
34	Bone CLARITY: Clearing, imaging, and computational analysis of osteoprogenitors within intact bone marrow. Science Translational Medicine, 2017, 9, .	5.8	160
35	The Serotonergic Raphe Promote Sleep in Zebrafish and Mice. Neuron, 2019, 103, 686-701.e8.	3.8	160
36	Microbiota regulate social behaviour via stress response neurons in the brain. Nature, 2021, 595, 409-414.	13.7	142

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37	Machine learning-guided channelrhodopsin engineering enables minimally invasive optogenetics. Nature Methods, 2019, 16, 1176-1184.	9.0	141
38	Identification of peripheral neural circuits that regulate heart rate using optogenetic and viral vector strategies. Nature Communications, 2019, 10, 1944.	5.8	140
39	Low- and high-thermogenic brown adipocyte subpopulations coexist in murine adipose tissue. Journal of Clinical Investigation, 2019, 130, 247-257.	3.9	134
40	Viral Strategies for Targeting the Central and Peripheral Nervous Systems. Annual Review of Neuroscience, 2018, 41, 323-348.	5.0	127
41	Archaerhodopsin variants with enhanced voltage-sensitive fluorescence in mammalian and Caenorhabditis elegans neurons. Nature Communications, 2014, 5, 4894.	5.8	124
42	Multiplexed Cre-dependent selection yields systemic AAVs for targeting distinct brain cell types. Nature Methods, 2020, 17, 541-550.	9.0	121
43	Exposing the Three-Dimensional Biogeography and Metabolic States of Pathogens in Cystic Fibrosis Sputum via Hydrogel Embedding, Clearing, and rRNA Labeling. MBio, 2016, 7, .	1.8	112
44	Directed Evolution of a Selective and Sensitive Serotonin Sensor via Machine Learning. Cell, 2020, 183, 1986-2002.e26.	13.5	104
45	Machine learning to design integral membrane channelrhodopsins for efficient eukaryotic expression and plasma membrane localization. PLoS Computational Biology, 2017, 13, e1005786.	1.5	96
46	Hydrogel-Tissue Chemistry: Principles and Applications. Annual Review of Biophysics, 2018, 47, 355-376.	4.5	95
47	Enhancer viruses for combinatorial cell-subclass-specific labeling. Neuron, 2021, 109, 1449-1464.e13.	3.8	93
48	Functional enhancer elements drive subclass-selective expression from mouse to primate neocortex. Cell Reports, 2021, 34, 108754.	2.9	88
49	Directed evolution of a far-red fluorescent rhodopsin. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13034-13039.	3.3	84
50	Two-Photon Microscopy with a Double-Wavelength Metasurface Objective Lens. Nano Letters, 2018, 18, 4943-4948.	4.5	77
51	Deep tissue optical focusing and optogenetic modulation with time-reversed ultrasonically encoded light. Science Advances, 2017, 3, eaao5520.	4.7	60
52	Optogenetic Delay of Status Epilepticus Onset in an In Vivo Rodent Epilepsy Model. PLoS ONE, 2013, 8, e62013.	1.1	58
53	Genetically Encoded Spy Peptide Fusion System to Detect Plasma Membrane-Localized Proteins InÂVivo. Chemistry and Biology, 2015, 22, 1108-1121.	6.2	56
54	Directed Evolution of a Bright Near-Infrared Fluorescent Rhodopsin Using a Synthetic Chromophore. Cell Chemical Biology, 2017, 24, 415-425.	2.5	55

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55	Engineered AAVs for non-invasive gene delivery to rodent and non-human primate nervous systems. Neuron, 2022, 110, 2242-2257.e6.	3.8	55
56	Structure-guided SCHEMA recombination generates diverse chimeric channelrhodopsins. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2624-E2633.	3.3	51
57	Specific and behaviorally consequential astrocyte Gq GPCR signaling attenuation inÂvivo with iÎ²ARK. Neuron, 2021, 109, 2256-2274.e9.	3.8	47
58	Whole-Brain Analysis of Cells and Circuits by Tissue Clearing and Light-Sheet Microscopy. Journal of Neuroscience, 2018, 38, 9330-9337.	1.7	45
59	Adeno-Associated Virus Toolkit to Target Diverse Brain Cells. Annual Review of Neuroscience, 2022, 45, 447-469.	5.0	44
60	TRIM9-Mediated Resolution of Neuroinflammation Confers Neuroprotection upon Ischemic Stroke in Mice. Cell Reports, 2019, 27, 549-560.e6.	2.9	43
61	Extracting structural and functional features of widely distributed biological circuits with single cell resolution via tissue clearing and delivery vectors. Current Opinion in Biotechnology, 2016, 40, 193-207.	3.3	41
62	Genomic Reconstruction of an Uncultured Hydrothermal Vent Gammaproteobacterial Methanotroph (Family Methylothermaceae) Indicates Multiple Adaptations to Oxygen Limitation. Frontiers in Microbiology, 2015, 6, 1425.	1.5	36
63	RecV recombinase system for in vivo targeted optogenomic modifications of single cells or cell populations. Nature Methods, 2020, 17, 422-429.	9.0	36
64	Imaging neuromodulators with high spatiotemporal resolution using genetically encoded indicators. Nature Protocols, 2019, 14, 3471-3505.	5.5	33
65	Optical dopamine monitoring with dLight1 reveals mesolimbic phenotypes in a mouse model of neurofibromatosis typeÂ1. ELife, 2019, 8, .	2.8	33
66	Deep Parallel Characterization of AAV Tropism and AAV-Mediated Transcriptional Changes via Single-Cell RNA Sequencing. Frontiers in Immunology, 2021, 12, 730825.	2.2	31
67	Brain-wide Cas9-mediated cleavage of a gene causing familial Alzheimerâ€™s disease alleviates amyloid-related pathologies in mice. Nature Biomedical Engineering, 2022, 6, 168-180.	11.6	27
68	Cholinergic neurons constitutively engage the ISR for dopamine modulation and skill learning in mice. Science, 2021, 372, .	6.0	26
69	Human embryo polarization requires PLC signaling to mediate trophectoderm specification. ELife, 2021, 10, .	2.8	24
70	Dopaminergic dysfunction in neurodevelopmental disorders: recent advances and synergistic technologies to aid basic research. Current Opinion in Neurobiology, 2018, 48, 17-29.	2.0	23
71	Glutamate in primary afferents is required for itch transmission. Neuron, 2022, 110, 809-823.e5.	3.8	18
72	Positron emission tomography imaging of novel AAV capsids maps rapid brain accumulation. Nature Communications, 2020, 11, 2102.	5.8	17

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73	Dorsal Raphe Dopamine Neurons Signal Motivational Salience Dependent on Internal State, Expectation, and Behavioral Context. Journal of Neuroscience, 2021, 41, 2645-2655.	1.7	16
74	The SHREAD gene therapy platform for paracrine delivery improves tumor localization and intratumoral effects of a clinical antibody. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	15
75	Controlling Neuronal Activity. American Journal of Psychiatry, 2008, 165, 562-562.	4.0	11
76	Light-guided sectioning for precise in situ localization and tissue interface analysis for brain-implanted optical fibers and GRIN lenses. Cell Reports, 2021, 36, 109744.	2.9	9
77	Q&A: How can advances in tissue clearing and optogenetics contribute to our understanding of normal and diseased biology?. BMC Biology, 2017, 15, 87.	1.7	8
78	Expanding the brain researcher's toolkit. Science, 2020, 369, 637-637.	6.0	7
79	Use of high-content imaging to quantify transduction of AAV-PHP viruses in the brain following systemic delivery. Brain Communications, 2021, 3, fcab105.	1.5	7
80	Improved systemic AAV gene therapy with a neurotrophic capsid in Niemannâ€"Pick disease type C1 mice. Life Science Alliance, 2021, 4, e202101040.	1.3	6
81	Fluorescent boost for voltage sensors. Nature, 2016, 529, 469-470.	13.7	5
82	Age-dependent alterations in key components of the nigrostriatal dopaminergic system and distinct motor phenotypes. Acta Pharmacologica Sinica, 2022, 43, 862-875.	2.8	5
83	Lee et al. reply. Nature, 2010, 468, E4-E5.	13.7	3
84	Overriding sleep. Science, 2017, 358, 457-457.	6.0	3
85	Gene therapy for the treatment of Niemann-Pick disease type C1: Comparison of AAV9 to a novel serotype, AAV-PHP.B. Molecular Genetics and Metabolism, 2018, 123, S36-S37.	0.5	0
86	Time-reversed ultrasonically encoded (TRUE) focusing for deep-tissue optogenetic modulation. , 2018, , .		0