# Viviana Gradinaru

List of Publications by Year
in descending order



| 86 | 22,263 | 39113 52 | 56606 87 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 107 | 107 | 107 | 30734 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | 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 |
| 2 | 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 |
| 3 | Glutamate in primary afferents is required for itch transmission. Neuron, 2022, 110, 809-823.e5. | 3.8 | 18 |
| 4 | 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 |
| 5 | Adeno-Associated Virus Toolkit to Target Diverse Brain Cells. Annual Review of Neuroscience, 2022, 45, 447-469. | 5.0 | 44 |
| 6 | Engineered AAVs for non-invasive gene delivery to rodent and non-human primate nervous systems. Neuron, 2022, 110, 2242-2257.e6. | 3.8 | 55 |
| 7 | 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 |
| 8 | Functional enhancer elements drive subclass-selective expression from mouse to primate neocortex. Cell Reports, 2021, 34, 108754. | 2.9 | 88 |
| 9 | 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 |
| 10 | Cholinergic neurons constitutively engage the ISR for dopamine modulation and skill learning in mice. Science, 2021, 372, . | 6.0 | 26 |
| 11 | Enhancer viruses for combinatorial cell-subclass-specific labeling. Neuron, 2021, 109, 1449-1464.e13. | 3.8 | 93 |
| 12 | 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 |
| 13 | Microbiota regulate social behaviour via stress response neurons in the brain. Nature, 2021, 595, 409-414. | 13.7 | 142 |
| 14 | Specific and behaviorally consequential astrocyte Gq GPCR signaling attenuation inÂvivo with iÎ²ARK. Neuron, 2021, 109, 2256-2274.e9. | 3.8 | 47 |
| 15 | 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 |
| 16 | Human embryo polarization requires PLC signaling to mediate trophectoderm specification. ELife, 2021, 10, . | 2.8 | 24 |
| 17 | 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 |
| 18 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Tissue clearing and its applications inÂneuroscience. Nature Reviews Neuroscience, 2020, 21, 61-79. | 4.9 | 350 |
| 20 | Negative feedback control of neuronal activity by microglia. Nature, 2020, 586, 417-423. | 13.7 | 520 |
| 21 | Expanding the brain researcher's toolkit. Science, 2020, 369, 637-637. | 6.0 | 7 |
| 22 | Directed Evolution of a Selective and Sensitive Serotonin Sensor via Machine Learning. Cell, 2020, 183, 1986-2002.e26. | 13.5 | 104 |
| 23 | RecV recombinase system for in vivo targeted optogenomic modifications of single cells or cell populations. Nature Methods, 2020, 17, 422-429. | 9.0 | 36 |
| 24 | LRP1 is a master regulator of tau uptake and spread. Nature, 2020, 580, 381-385. | 13.7 | 326 |
| 25 | Gut-seeded Î±-synuclein fibrils promote gut dysfunction and brain pathology specifically in aged mice. Nature Neuroscience, 2020, 23, 327-336. | 7.1 | 247 |
| 26 | Positron emission tomography imaging of novel AAV capsids maps rapid brain accumulation. Nature Communications, 2020, 11, 2102. | 5.8 | 17 |
| 27 | Multiplexed Cre-dependent selection yields systemic AAVs for targeting distinct brain cell types. Nature Methods, 2020, 17, 541-550. | 9.0 | 121 |
| 28 | A gut bacterial amyloid promotes Î±-synuclein aggregation and motor impairment in mice. ELife, 2020, 9, . | 2.8 | 251 |
| 29 | The Serotonergic Raphe Promote Sleep in Zebrafish and Mice. Neuron, 2019, 103, 686-701.e8. | 3.8 | 160 |
| 30 | Imaging neuromodulators with high spatiotemporal resolution using genetically encoded indicators. Nature Protocols, 2019, 14, 3471-3505. | 5.5 | 33 |
| 31 | Identification of peripheral neural circuits that regulate heart rate using optogenetic and viral vector strategies. Nature Communications, 2019, 10, 1944. | 5.8 | 140 |
| 32 | TRIM9-Mediated Resolution of Neuroinflammation Confers Neuroprotection upon Ischemic Stroke in Mice. Cell Reports, 2019, 27, 549-560.e6. | 2.9 | 43 |
| 33 | Machine learning-guided channelrhodopsin engineering enables minimally invasive optogenetics. Nature Methods, 2019, 16, 1176-1184. | 9.0 | 141 |
| 34 | Systemic AAV vectors for widespread and targeted gene delivery in rodents. Nature Protocols, 2019, 14, 379-414. | 5.5 | 235 |
| 35 | Low- and high-thermogenic brown adipocyte subpopulations coexist in murine adipose tissue. Journal of Clinical Investigation, 2019, 130, 247-257. | 3.9 | 134 |
| 36 | Optical dopamine monitoring with dLight1 reveals mesolimbic phenotypes in a mouse model of neurofibromatosis typeÂ1. ELife, 2019, 8, . | 2.8 | 33 |

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|---|---|---|---|
| 37 | 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 |
| 38 | Viral Strategies for Targeting the Central and Peripheral Nervous Systems. Annual Review of Neuroscience, 2018, 41, 323-348. | 5.0 | 127 |
| 39 | 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 |
| 40 | Whole-Brain Analysis of Cells and Circuits by Tissue Clearing and Light-Sheet Microscopy. Journal of Neuroscience, 2018, 38, 9330-9337. | 1.7 | 45 |
| 41 | The Neuropeptide Tac2 Controls a Distributed Brain State Induced by Chronic Social Isolation Stress. Cell, 2018, 173, 1265-1279.e19. | 13.5 | 211 |
| 42 | Ultrafast neuronal imaging of dopamine dynamics with designed genetically encoded sensors. Science, 2018, 360, . | 6.0 | 773 |
| 43 | Hydrogel-Tissue Chemistry: Principles and Applications. Annual Review of Biophysics, 2018, 47, 355-376. | 4.5 | 95 |
| 44 | Two-Photon Microscopy with a Double-Wavelength Metasurface Objective Lens. Nano Letters, 2018, 18, 4943-4948. | 4.5 | 77 |
| 45 | Time-reversed ultrasonically encoded (TRUE) focusing for deep-tissue optogenetic modulation. , 2018, , . | | 0 |
| 46 | 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 |
| 47 | Directed Evolution of a Bright Near-Infrared Fluorescent Rhodopsin Using a Synthetic Chromophore. Cell Chemical Biology, 2017, 24, 415-425. | 2.5 | 55 |
| 48 | Bone CLARITY: Clearing, imaging, and computational analysis of osteoprogenitors within intact bone marrow. Science Translational Medicine, 2017, 9, . | 5.8 | 160 |
| 49 | Global Representations of Goal-Directed Behavior in Distinct Cell Types of Mouse Neocortex. Neuron, 2017, 94, 891-907.e6. | 3.8 | 316 |
| 50 | Dorsal Raphe Dopamine Neurons Modulate Arousal and Promote Wakefulness by Salient Stimuli. Neuron, 2017, 94, 1205-1219.e8. | 3.8 | 201 |
| 51 | Overriding sleep. Science, 2017, 358, 457-457. | 6.0 | 3 |
| 52 | The Jellyfish Cassiopea Exhibits a Sleep-like State. Current Biology, 2017, 27, 2984-2990.e3. | 1.8 | 171 |
| 53 | Deep tissue optical focusing and optogenetic modulation with time-reversed ultrasonically encoded light. Science Advances, 2017, 3, eaao5520. | 4.7 | 60 |
| 54 | 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 |

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|---|---|---|---|
| 55 | Engineered AAVs for efficient noninvasive gene delivery to the central and peripheral nervous systems. Nature Neuroscience, 2017, 20, 1172-1179. | 7.1 | 927 |
| 56 | Machine learning to design integral membrane channelrhodopsins for efficient eukaryotic expression and plasma membrane localization. PLoS Computational Biology, 2017, 13, e1005786. | 1.5 | 96 |
| 57 | 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 |
| 58 | 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 |
| 59 | Gut Microbiota Regulate Motor Deficits and Neuroinflammation in a Model of Parkinsonâ€™s Disease. Cell, 2016, 167, 1469-1480.e12. | 13.5 | 2,399 |
| 60 | 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 |
| 61 | Cholinergic Mesopontine Signals Govern Locomotion and Reward through Dissociable Midbrain Pathways. Neuron, 2016, 90, 333-347. | 3.8 | 168 |
| 62 | Regional glutamine deficiency in tumours promotes dedifferentiation through inhibition of histoneÂdemethylation. Nature Cell Biology, 2016, 18, 1090-1101. | 4.6 | 291 |
| 63 | Fluorescent boost for voltage sensors. Nature, 2016, 529, 469-470. | 13.7 | 5 |
| 64 | Cre-dependent selection yields AAV variants for widespread gene transfer to the adult brain. Nature Biotechnology, 2016, 34, 204-209. | 9.4 | 727 |
| 65 | 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 |
| 66 | Genetically Encoded Spy Peptide Fusion System to Detect Plasma Membrane-Localized Proteins InÂVivo. Chemistry and Biology, 2015, 22, 1108-1121. | 6.2 | 56 |
| 67 | 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 |
| 68 | Bioelectronic medicines: a research roadmap. Nature Reviews Drug Discovery, 2014, 13, 399-400. | 21.5 | 283 |
| 69 | Archaerhodopsin variants with enhanced voltage-sensitive fluorescence in mammalian and Caenorhabditis elegans neurons. Nature Communications, 2014, 5, 4894. | 5.8 | 124 |
| 70 | Single-Cell Phenotyping within Transparent Intact Tissue through Whole-Body Clearing. Cell, 2014, 158, 945-958. | 13.5 | 833 |
| 71 | 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 |
| 72 | Structural and molecular interrogation of intact biological systems. Nature, 2013, 497, 332-337. | 13.7 | 1,765 |

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|---|---|---|---|
| 73 | Optogenetic Delay of Status Epilepticus Onset in an In Vivo Rodent Epilepsy Model. PLoS ONE, 2013, 8, e62013. | 1.1 | 58 |
| 74 | Principles for applying optogenetic tools derived from direct comparative analysis of microbial opsins. Nature Methods, 2012, 9, 159-172. | 9.0 | 666 |
| 75 | Leptin regulates the reward value of nutrient. Nature Neuroscience, 2011, 14, 1562-1568. | 7.1 | 201 |
| 76 | Dynamics of Retrieval Strategies for Remote Memories. Cell, 2011, 147, 678-689. | 13.5 | 481 |
| 77 | Amygdala circuitry mediating reversible and bidirectional control of anxiety. Nature, 2011, 471, 358-362. | 13.7 | 1,073 |
| 78 | Global and local fMRI signals driven by neurons defined optogenetically by type and wiring. Nature, 2010, 465, 788-792. | 13.7 | 659 |
| 79 | Lee et al. reply. Nature, 2010, 468, E4-E5. | 13.7 | 3 |
| 80 | Optogenetic interrogation of neural circuits: technology for probing mammalian brain structures. Nature Protocols, 2010, 5, 439-456. | 5.5 | 895 |
| 81 | Cholinergic Interneurons Control Local Circuit Activity and Cocaine Conditioning. Science, 2010, 330, 1677-1681. | 6.0 | 417 |
| 82 | Molecular and Cellular Approaches for Diversifying and Extending Optogenetics. Cell, 2010, 141, 154-165. | 13.5 | 919 |
| 83 | Optical Deconstruction of Parkinsonian Neural Circuitry. Science, 2009, 324, 354-359. | 6.0 | 1,385 |
| 84 | eNpHR: a Natronomonas halorhodopsin enhanced for optogenetic applications. Brain Cell Biology, 2008, 36, 129-139. | 3.5 | 454 |
| 85 | Controlling Neuronal Activity. American Journal of Psychiatry, 2008, 165, 562-562. | 4.0 | 11 |
| 86 | Targeting and Readout Strategies for Fast Optical Neural ControlIn VitroandIn Vivo. Journal of Neuroscience, 2007, 27, 14231-14238. | 1.7 | 450 |