# Sacha B Nelson

List of Publications by Year
in descending order



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|---|---|---|---|
| 95 papers | 24,324 citations | 20759 60 h-index | 37111 96 g-index |
| 127 all docs | 127 docs citations | 127 times ranked | 20855 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Homeostasis. Cell Systems, 2021, 12, 1124-1126. | 2.9 | 0 |
| 2 | Cortical RORÎ² is required for layer 4 transcriptional identity and barrel integrity. ELife, 2020, 9, . | 2.8 | 21 |
| 3 | Deletion of Stk11 and Fos in mouse BLA projection neurons alters intrinsic excitability and impairs formation of long-term aversive memory. ELife, 2020, 9, . | 2.8 | 7 |
| 4 | Single and population coding of taste in the gustatory cortex of awake mice. Journal of Neurophysiology, 2019, 122, 1342-1356. | 0.9 | 44 |
| 5 | Editorial overview: Neuronal Identity. Current Opinion in Neurobiology, 2019, 56, iii-iv. | 2.0 | 0 |
| 6 | A repeated molecular architecture across thalamic pathways. Nature Neuroscience, 2019, 22, 1925-1935. | 7.1 | 132 |
| 7 | Mapping the transcriptional diversity of genetically and anatomically defined cell populations in the mouse brain. ELife, 2019, 8, . | 2.8 | 59 |
| 8 | ATAC-seq on Sorted Adult Mouse Neurons. Bio-protocol, 2019, 9, e3382. | 0.2 | 2 |
| 9 | The role of the gustatory cortex in incidental experience-evoked enhancement of later taste learning. Learning and Memory, 2018, 25, 587-600. | 0.5 | 15 |
| 10 | Optogenetic Mapping of Intracortical Circuits Originating from Semilunar Cells in the Piriform Cortex. Cerebral Cortex, 2017, 27, bhv258. | 1.6 | 24 |
| 11 | Prenatal thalamic waves regulate cortical area size prior to sensory processing. Nature Communications, 2017, 8, 14172. | 5.8 | 132 |
| 12 | Dicer maintains the identity and function of proprioceptive sensory neurons. Journal of Neurophysiology, 2017, 117, 1057-1069. | 0.9 | 16 |
| 13 | The Cellular and Synaptic Architecture of the Mechanosensory Dorsal Horn. Cell, 2017, 168, 295-310.e19. | 13.5 | 306 |
| 14 | A Mammalian enhancer trap resource for discovering and manipulating neuronal cell types. ELife, 2016, 5, e13503. | 2.8 | 57 |
| 15 | Upregulation of Î¼3A Drives Homeostatic Plasticity by Rerouting AMPAR into the Recycling Endosomal Pathway. Cell Reports, 2016, 16, 2711-2722. | 2.9 | 19 |
| 16 | Striosomeâ€"dendron bouquets highlight a unique striatonigral circuit targeting dopamine-containing neurons. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11318-11323. | 3.3 | 112 |
| 17 | Synapse and genome: An elusive tÃªte-Ã-tÃªte. Science Signaling, 2015, 8, pe2. | 1.6 | 3 |
| 18 | Excitatory/Inhibitory Balance and Circuit Homeostasis in Autism Spectrum Disorders. Neuron, 2015, 87, 684-698. | 3.8 | 858 |

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|---|---|---|---|
| 19 | RNASeqMetaDB: a database and web server for navigating metadata of publicly available mouse RNA-Seq datasets. Bioinformatics, 2015, 31, 4038-4040. | 1.8 | 14 |
| 20 | Cell-Type-Specific Repression by Methyl-CpG-Binding Protein 2 Is Biased toward Long Genes. Journal of Neuroscience, 2014, 34, 12877-12883. | 1.7 | 119 |
| 21 | Cell-typeâ€"based model explaining coexpression patterns of genes in the brain. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5397-5402. | 3.3 | 66 |
| 22 | New insights into the classification and nomenclature of cortical GABAergic interneurons. Nature Reviews Neuroscience, 2013, 14, 202-216. | 4.9 | 707 |
| 23 | Convergence of pontine and proprioceptive streams onto multimodal cerebellar granule cells. ELife, 2013, 2, e00400. | 2.8 | 206 |
| 24 | A Critical and Cell-Autonomous Role for MeCP2 in Synaptic Scaling Up. Journal of Neuroscience, 2012, 32, 13529-13536. | 1.7 | 122 |
| 25 | Preclinical research in Rett syndrome: setting the foundation for translational success. DMM Disease Models and Mechanisms, 2012, 5, 733-745. | 1.2 | 183 |
| 26 | A Resource of Cre Driver Lines for Genetic Targeting of GABAergic Neurons in Cerebral Cortex. Neuron, 2011, 71, 995-1013. | 3.8 | 1,659 |
| 27 | MeCP2: Phosphorylated Locally, Acting Globally. Neuron, 2011, 72, 3-5. | 3.8 | 11 |
| 28 | Recent advances in single-cell MALDI mass spectrometry imaging and potential clinical impact. Expert Review of Proteomics, 2011, 8, 591-604. | 1.3 | 89 |
| 29 | A Quantitative Comparison of Cell-Type-Specific Microarray Gene Expression Profiling Methods in the Mouse Brain. PLoS ONE, 2011, 6, e16493. | 1.1 | 108 |
| 30 | Neurobiology of disease. Current Opinion in Neurobiology, 2011, 21, 823-826. | 2.0 | 1 |
| 31 | Activityâ€dependent changes in the firing properties of neocortical fastâ€spiking interneurons in the absence of large changes in gene expression. Developmental Neurobiology, 2011, 71, 62-70. | 1.5 | 35 |
| 32 | Cell Type-Specific Transcriptomics in the Brain. Journal of Neuroscience, 2011, 31, 6939-6943. | 1.7 | 100 |
| 33 | Ten years of Nature Reviews Neuroscience: insights from the highly cited. Nature Reviews Neuroscience, 2010, 11, 718-726. | 4.9 | 32 |
| 34 | Dissecting differential gene expression within the circadian neuronal circuit of Drosophila. Nature Neuroscience, 2010, 13, 60-68. | 7.1 | 135 |
| 35 | Genome-wide identification of targets of the <i>droshaâ€"pasha/DGCR8</i> complex. Rna, 2009, 15, 537-545. | 1.6 | 104 |
| 36 | Pathophysiology of Locus Ceruleus Neurons in a Mouse Model of Rett Syndrome. Journal of Neuroscience, 2009, 29, 12187-12195. | 1.7 | 110 |

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|---|---|---|---|
| 37 | A role for microRNAs in the <i>Drosophila</i> circadian clock. Genes and Development, 2009, 23, 2179-2191. | 2.7 | 178 |
| 38 | Transcriptional and Electrophysiological Maturation of Neocortical Fast-Spiking GABAergic Interneurons. Journal of Neuroscience, 2009, 29, 7040-7052. | 1.7 | 256 |
| 39 | Intact Long-Term Potentiation but Reduced Connectivity between Neocortical Layer 5 Pyramidal Neurons in a Mouse Model of Rett Syndrome. Journal of Neuroscience, 2009, 29, 11263-11270. | 1.7 | 112 |
| 40 | Strength through Diversity. Neuron, 2008, 60, 477-482. | 3.8 | 208 |
| 41 | The <i>Fezf2â€“Ctip2</i> genetic pathway regulates the fate choice of subcortical projection neurons in the developing cerebral cortex. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 11382-11387. | 3.3 | 313 |
| 42 | Region-Specific Spike-Frequency Acceleration in Layer 5 Pyramidal Neurons Mediated by Kv1 Subunits. Journal of Neuroscience, 2008, 28, 13716-13726. | 1.7 | 58 |
| 43 | Layer V Neurons in Mouse Cortex Projecting to Different Targets Have Distinct Physiological Properties. Journal of Neurophysiology, 2007, 98, 3330-3340. | 0.9 | 319 |
| 44 | Multiple forms of long-term plasticity at unitary neocortical layer 5 synapses. Neuropharmacology, 2007, 52, 176-184. | 2.0 | 82 |
| 45 | A manual method for the purification of fluorescently labeled neurons from the mammalian brain. Nature Protocols, 2007, 2, 2924-2929. | 5.5 | 133 |
| 46 | The squirrel as a rodent model of the human visual system. Visual Neuroscience, 2006, 23, 765-778. | 0.5 | 64 |
| 47 | Lack of Patchy Horizontal Connectivity in Primary Visual Cortex of a Mammal without Orientation Maps. Journal of Neuroscience, 2006, 26, 7680-7692. | 1.7 | 61 |
| 48 | The Disease Progression of Mecp2 Mutant Mice Is Affected by the Level of BDNF Expression. Neuron, 2006, 49, 341-348. | 3.8 | 512 |
| 49 | The problem of neuronal cell types: a physiological genomics approach. Trends in Neurosciences, 2006, 29, 339-345. | 4.2 | 145 |
| 50 | The squirrel as a rodent model of the human visual system. Visual Neuroscience, 2006, 23, 941-941. | 0.5 | 0 |
| 51 | Molecular taxonomy of major neuronal classes in the adult mouse forebrain. Nature Neuroscience, 2006, 9, 99-107. | 7.1 | 502 |
| 52 | Potentiation of cortical inhibition by visual deprivation. Nature, 2006, 443, 81-84. | 13.7 | 344 |
| 53 | Probing the transcriptome of neuronal cell types. Current Opinion in Neurobiology, 2006, 16, 571-576. | 2.0 | 82 |
| 54 | Laminar Organization of Response Properties in Primary Visual Cortex of the Gray Squirrel(Sciurus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 | 0.9 | 57 |

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|---|---|---|---|
| 55 | Highly Nonrandom Features of Synaptic Connectivity in Local Cortical Circuits. PLoS Biology, 2005, 3, e68. | 2.6 | 1,222 |
| 56 | Reduced cortical activity due to a shift in the balance between excitation and inhibition in a mouse model of Rett Syndrome. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12560-12565. | 3.3 | 558 |
| 57 | Orientation Selectivity without Orientation Maps in Visual Cortex of a Highly Visual Mammal. Journal of Neuroscience, 2005, 25, 19-28. | 1.7 | 161 |
| 58 | Functional cell classes and functional architecture in the early visual system of a highly visual rodent. Progress in Brain Research, 2005, 149, 127-145. | 0.9 | 24 |
| 59 | Endocannabinoid-Dependent Neocortical Layer-5 LTD in the Absence of Postsynaptic Spiking. Journal of Neurophysiology, 2004, 92, 3338-3343. | 0.9 | 85 |
| 60 | Hebb and anti-Hebb meet in the brainstem. Nature Neuroscience, 2004, 7, 687-688. | 7.1 | 15 |
| 61 | A proportional but slower NMDA potentiation follows AMPA potentiation in LTP. Nature Neuroscience, 2004, 7, 518-524. | 7.1 | 139 |
| 62 | Selective reconfiguration of layer 4 visual cortical circuitry by visual deprivation. Nature Neuroscience, 2004, 7, 1353-1359. | 7.1 | 358 |
| 63 | Homeostatic plasticity in the developing nervous system. Nature Reviews Neuroscience, 2004, 5, 97-107. | 4.9 | 2,027 |
| 64 | Activity-Dependent Remodeling of Presynaptic Inputs by Postsynaptic Expression of Activated CaMKII. Neuron, 2003, 39, 269-281. | 3.8 | 93 |
| 65 | Neocortical LTD via Coincident Activation of Presynaptic NMDA and Cannabinoid Receptors. Neuron, 2003, 39, 641-654. | 3.8 | 532 |
| 66 | The NMDA-to-AMPA Ratio at Synapses Onto Layer 2/3 Pyramidal Neurons Is Conserved Across Prefrontal and Visual Cortices. Journal of Neurophysiology, 2003, 90, 771-779. | 0.9 | 180 |
| 67 | Receptive Field Properties and Laminar Organization of Lateral Geniculate Nucleus in the Gray Squirrel (Sciurus carolinensis). Journal of Neurophysiology, 2003, 90, 3398-3418. | 0.9 | 58 |
| 68 | Rate and timing in cortical synaptic plasticity. Philosophical Transactions of the Royal Society B: Biological Sciences, 2002, 357, 1851-1857. | 1.8 | 28 |
| 69 | Short-Term Depression at Thalamocortical Synapses Contributes to Rapid Adaptation of Cortical Sensory Responses In Vivo. Neuron, 2002, 34, 437-446. | 3.8 | 454 |
| 70 | Fast Propagation of Firing Rates through Layered Networks of Noisy Neurons. Journal of Neuroscience, 2002, 22, 1956-1966. | 1.7 | 193 |
| 71 | Spike timing, calcium signals and synaptic plasticity. Current Opinion in Neurobiology, 2002, 12, 305-314. | 2.0 | 199 |
| 72 | Multi-unit spike-triggered averaging: a method for probing the physiology of central synapses. Journal of Neuroscience Methods, 2002, 120, 121-129. | 1.3 | 5 |

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|---|---|---|---|
| 73 | Critical periods for experience-dependent synaptic scaling in visual cortex. Nature Neuroscience, 2002, 5, 783-789. | 7.1 | 541 |
| 74 | Rate, Timing, and Cooperativity Jointly Determine Cortical Synaptic Plasticity. Neuron, 2001, 32, 1149-1164. | 3.8 | 1,022 |
| 75 | Postsynaptic Depolarization Scales Quantal Amplitude in Cortical Pyramidal Neurons. Journal of Neuroscience, 2001, 21, RC170-RC170. | 1.7 | 114 |
| 76 | Synaptic plasticity: taming the beast. Nature Neuroscience, 2000, 3, 1178-1183. | 7.1 | 1,822 |
| 77 | A recurrent network model for the phase invariance of complex cell responses. Neurocomputing, 2000, 32-33, 339-344. | 3.5 | 5 |
| 78 | Hebb and homeostasis in neuronal plasticity. Current Opinion in Neurobiology, 2000, 10, 358-364. | 2.0 | 594 |
| 79 | Multiple Forms of Short-Term Plasticity at Excitatory Synapses in Rat Medial Prefrontal Cortex. Journal of Neurophysiology, 2000, 83, 3031-3041. | 0.9 | 195 |
| 80 | Timing Isn't Everything. Neuron, 2000, 26, 545-546. | 3.8 | 5 |
| 81 | Activity Coregulates Quantal AMPA and NMDA Currents at Neocortical Synapses. Neuron, 2000, 26, 659-670. | 3.8 | 300 |
| 82 | Complex cells as cortically amplified simple cells. Nature Neuroscience, 1999, 2, 277-282. | 7.1 | 179 |
| 83 | Activity-dependent regulation of excitability in rat visual cortical neurons. Neurocomputing, 1999, 26-27, 101-106. | 3.5 | 12 |
| 84 | Decorrelation of spike trains by synaptic depression. Neurocomputing, 1999, 26-27, 147-153. | 3.5 | 16 |
| 85 | Dynamics of neuronal processing in rat somatosensory cortex. Trends in Neurosciences, 1999, 22, 513-520. | 4.2 | 143 |
| 86 | Differential Depression at Excitatory and Inhibitory Synapses in Visual Cortex. Journal of Neuroscience, 1999, 19, 4293-4304. | 1.7 | 174 |
| 87 | Activity-dependent scaling of quantal amplitude in neocortical neurons. Nature, 1998, 391, 892-896. | 13.7 | 1,944 |
| 88 | Synaptic depression: a key player in the cortical balancing act. Nature Neuroscience, 1998, 1, 539-541. | 7.1 | 56 |
| 89 | BDNF Has Opposite Effects on the Quantal Amplitude of Pyramidal Neuron and Interneuron Excitatory Synapses. Neuron, 1998, 21, 521-530. | 3.8 | 425 |
| 90 | Thinking Globally, Acting Locally. Neuron, 1998, 21, 933-935. | 3.8 | 62 |

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|---|---|---|---|
| 91 | Synaptic Depression and the Temporal Response Characteristics of V1 Cells. Journal of Neuroscience, 1998, 18, 4785-4799. | 1.7 | 352 |
| 92 | Spatio-Temporal Subthreshold Receptive Fields in the Vibrissa Representation of Rat Primary Somatosensory Cortex. Journal of Neurophysiology, 1998, 80, 2882-2892. | 0.9 | 297 |
| 93 | A Quantitative Description of Short-Term Plasticity at Excitatory Synapses in Layer 2/3 of Rat Primary Visual Cortex. Journal of Neuroscience, 1997, 17, 7926-7940. | 1.7 | 527 |
| 94 | NMDA receptors in sensory information processing. Current Opinion in Neurobiology, 1992, 2, 484-488. | 2.0 | 17 |
| 95 | Topographic organization of the optic radiation of the cat. Journal of Comparative Neurology, 1985, 240, 322-330. | 0.9 | 35 |