Resource Summary Report

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SenseLab

RRID:SCR_007276
Type: Tool

Proper Citation

SenseLab (RRID:SCR_007276)

Resource Information

URL: http://senselab.med.yale.edu

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Description: The SenseLab Project is a long-term effort to build integrated, multidisciplinary models of neurons and neural systems. It was founded in 1993 as part of the original Human Brain Project, which began the development of neuroinformatics tools in support of neuroscience research. It is now part of the Neuroscience Information Framework (NIF) and the International Neuroinformatics Coordinating Facility (INCF). The SenseLab project involves novel informatics approaches to constructing databases and database tools for collecting and analyzing neuroscience information, using the olfactory system as a model, with extension to other brain systems. SenseLab contains seven related databases that support experimental and theoretical research on the membrane properties: CellPropDB, NeuronDB, ModelDB, ORDB, OdorDB, OdorMapDB, BrainPharmA pilot Web portal that successfully integrates multidisciplinary neurocience data.

Abbreviations: SenseLab

Synonyms: SenseLab Project, The SenseLab Project

Resource Type: data or information resource, organization portal, database, portal

Keywords: neuron, model, olfactory system, brain, disease, neuronal, olfactory

Related Condition: Aging

Funding: Human Brain Project ;
Multidisciplinary University Research Initiative ;
NIMH ;
NIA ;
NICD ;
NINDS ;

NIDCD RO1 DC 009977

Resource Name: SenseLab

Resource ID: SCR_007276

Alternate IDs: nif-0000-00017

Record Creation Time: 20220129T080240+0000

Record Last Update: 20260729T044144+0000

Ratings and Alerts

No rating or validation information has been found for SenseLab.

No alerts have been found for SenseLab.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 41 mentions in open access literature.

Listed below are recent publications. The full list is available at SPARC SAWG .

Tumbala Gutti D, et al. (2025) Slow depolarizing electrical stimuli reveal differential time courses of nociceptor recovery after prolonged topical capsaicin in human skin. European journal of pain (London, England), 29(2), e4726.

Godenzini L, et al. (2022) Dendritic Compartmentalization of Learning-Related Plasticity. eNeuro, 9(3).

Raj S, et al. (2021) Investigating Olfactory Gene Variation and Odour Identification in Older Adults. Genes, 12(5).

Armijos Moya T, et al. (2021) The Effect of an Active Plant-Based System on Perceived Air Pollution. International journal of environmental research and public health, 18(15).

Bichler EK, et al. (2021) Changes in Excitability Properties of Ventromedial Motor Thalamic Neurons in 6-OHDA Lesioned Mice. eNeuro, 8(1).

Sylantyev S, et al. (2020) Extracellular GABA waves regulate coincidence detection in excitatory circuits. The Journal of physiology, 598(18), 4047.

S??gaard Jensen N, et al. (2019) Perceptual Effects of Adjusting Hearing-Aid Gain by Means of a Machine-Learning Approach Based on Individual User Preference. Trends in hearing, 23, 2331216519847413.

Solinas SMG, et al. (2019) A kinetic model for Brain-Derived Neurotrophic Factor mediated spike timing-dependent LTP. PLoS computational biology, 15(4), e1006975.

Lombardo J, et al. (2018) Rapid activity-dependent modulation of the intrinsic excitability through up-regulation of KCNQ/Kv7 channel function in neonatal spinal motoneurons. PloS one, 13(3), e0193948.

Pouille F, et al. (2017) Intraglomerular gap junctions enhance interglomerular synchrony in a sparsely connected olfactory bulb network. The Journal of physiology, 595(17), 5965.

Cavarretta F, et al. (2016) Glomerular and Mitral-Granule Cell Microcircuits Coordinate Temporal and Spatial Information Processing in the Olfactory Bulb. Frontiers in computational neuroscience, 10, 67.

Breton-Provencher V, et al. (2016) Principal cell activity induces spine relocation of adult-born interneurons in the olfactory bulb. Nature communications, 7, 12659.

Marenco L, et al. (2016) ORDB, HORDE, ODORactor and other on-line knowledge resources of olfactory receptor-odorant interactions. Database : the journal of biological databases and curation, 2016.

Cellot G, et al. (2016) Premature changes in neuronal excitability account for hippocampal network impairment and autistic-like behavior in neonatal BTBR T+tf/J mice. Scientific reports, 6, 31696.

Shehzad D, et al. (2016) Optimizing NEURON Simulation Environment Using Remote Memory Access with Recursive Doubling on Distributed Memory Systems. Computational intelligence and neuroscience, 2016, 3676582.

Ferrante M, et al. (2015) Distinct and synergistic feedforward inhibition of pyramidal cells by basket and bistratified interneurons. Frontiers in cellular neuroscience, 9, 439.

Hyun JH, et al. (2015) Kv1.2 mediates heterosynaptic modulation of direct cortical synaptic inputs in CA3 pyramidal cells. The Journal of physiology, 593(16), 3617.

Cavarretta F, et al. (2014) Effects of low frequency electric fields on synaptic integration in hippocampal CA1 pyramidal neurons: implications for power line emissions. Frontiers in cellular neuroscience, 8, 310.

Pettersen KH, et al. (2014) Power laws from linear neuronal cable theory: power spectral densities of the soma potential, soma membrane current and single-neuron contribution to the EEG. PLoS computational biology, 10(11), e1003928.

Migliore M, et al. (2014) Distributed organization of a brain microcircuit analyzed by three-dimensional modeling: the olfactory bulb. Frontiers in computational neuroscience, 8, 50.