

Resource Summary Report

Generated by ASWG on Aug 3, 2026

NEURON

RRID:SCR_017449

Type: Tool

Proper Citation

NEURON (RRID:SCR_017449)

Resource Information

URL: <https://neuron.yale.edu/neuron/>

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Description: Software for computational neurophysiology. Simulation environment is used for building and using computational models of neurons and networks of neurons. NEURON Users Group can participate in collaborative development of documentation, tutorials, and software.

Resource Type: simulation software, software resource, software application

Keywords: Computational, neurophysiology, model, neuron, network, building, BRAIN Initiative

Funding: NIBIB EB022903

Availability: Free, Available for download, Freely available

Resource Name: NEURON

Resource ID: SCR_017449

Alternate URLs: <https://github.com/neuronsimulator/nrn>

Record Creation Time: 20220129T080335+0000

Record Last Update: 20260803T040732+0000

Ratings and Alerts

No rating or validation information has been found for NEURON.

No alerts have been found for NEURON.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 241 mentions in open access literature.

Listed below are recent publications. The full list is available at [ASWG](#).

Moreira JV, et al. (2025) Closed-Loop Connectivity Best Supports Angular Tuning and Sleep Dynamics in a Biophysical Thalamocortical Circuit Model. bioRxiv : the preprint server for biology.

Habib M, et al. (2025) Neuropathic Pain and Distinct CASPR2 Autoantibody IgG Subclasses Drive Neuronal Hyperexcitability. Neurology(R) neuroimmunology & neuroinflammation, 12(4), e200423.

Haque R, et al. (2025) Decoding sexual dimorphism of the sex-shared nervous system at single-neuron resolution. bioRxiv : the preprint server for biology.

Duan H, et al. (2025) The locus coeruleus influences behavior by coordinating effective integration of fear memories and sensory input. PLoS biology, 23(7), e3003272.

Garcia JD, et al. (2025) Differential roles of NaV1.2 and NaV1.6 in neocortical pyramidal cell excitability. eLife, 14.

Weng TH, et al. (2025) Human glycogenins maintain glucose homeostasis by regulating glycogen metabolism. Nature communications, 16(1), 6556.

Ogunmowo TH, et al. (2025) Intersectin and endophilin condensates prime synaptic vesicles for release site replenishment. Nature neuroscience, 28(8), 1649.

Harris K, et al. (2025) Excitotoxic neuronal death requires superoxide entry into neurons through volume-regulated anion channels. Science advances, 11(35), eadw0424.

Sainburg T, et al. (2025) Domain general noise reduction for time series signals with Noisereduce. Scientific reports, 15(1), 30905.

Greenin-Whitehead K, et al. (2025) Ectopic sodium channel expression decreases excitability of Drosophila Kenyon cells. The Journal of physiology, 603(19), 5565.

Ye Z, et al. (2025) SNP rs615552 and lncRNA CDKN2B-AS1 influence brain cancer pathogenesis through multi-omic mechanisms. Scientific reports, 15(1), 27490.

Pazos S, et al. (2025) Synaptic and neural behaviours in a standard silicon transistor. Nature, 640(8057), 69.

Bajželj B, et al. (2025) Utilizing Molecular Descriptor Importance to Enhance Endpoint Predictions. Toxics, 13(5).

Stewart RG, et al. (2025) A Kv2 inhibitor combination reveals native neuronal conductances consistent with Kv2/KvS heteromers. *eLife*, 13.

Müller-Komorowska D, et al. (2025) Recurrent Interneuron Connectivity Does Not Support Synchrony in a Biophysical Dentate Gyrus Model. *eNeuro*, 12(4).

Zhao K, et al. (2025) 11,12-Diacetyl-Carnosol Ameliorates Depression-Like Behaviors and Memory Dysfunction in CUMS Mouse Model via Inhibiting HMGB1-Mediated Neuroinflammation. *CNS neuroscience & therapeutics*, 31(5), e70406.

Wang C, et al. (2025) Integrating physical units into high-performance AI-driven scientific computing. *Nature communications*, 16(1), 3609.

Oláh G, et al. (2025) Accelerated signal propagation speed in human neocortical dendrites. *eLife*, 13.

Arendt-Tranholm A, et al. (2025) Single-cell characterization of the human C2 dorsal root ganglion recovered from C1-2 arthrodesis surgery: implications for neck pain. *bioRxiv : the preprint server for biology*.

Cuyubamba O, et al. (2025) The Combination of Neurotropic Vitamins B1, B6, and B12 Enhances Neural Cell Maturation and Connectivity Superior to Single B Vitamins. *Cells*, 14(7).