Resource Summary Report

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NeuroMorpho.Org

RRID:SCR_002145
Type: Tool

Proper Citation

NeuroMorpho.Org (RRID:SCR_002145)

Resource Information

URL: http://neuromorpho.org/index.jsp

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Description: Centrally curated inventory of digitally reconstructed neurons associated with peer-reviewed publications that contains some of the most complete axonal arborizations digitally available in the community. Each neuron is represented by a unique identifier, general information (metadata), the original and standardized ASCII files of the digital morphological reconstruction, and a set of morphometric features. It contains contributions from over 100 laboratories worldwide and is continuously updated as new morphological reconstructions are collected, published, and shared. Users may browse by species, brain region, cell type or lab name. Users can also download morphological reconstructions for research and analysis. Deposition and distribution of reconstruction files ultimately prevents data loss. Centralized curation and annotation aims at minimizing the effort required by data owners while ensuring a unified format. It also provides a one-stop entry point for all available reconstructions, thus maximizing data visibility and impact.

Synonyms: Neuro Morpho, NeuroMorpho.org, NeuroMorpho

Resource Type: database, data repository, data or information resource, storage service resource, service resource

Defining Citation: PMID:17728438, PMID:16552417, PMID:18949582

Keywords: neuron, morphological reconstruction, morphometry, axonal arborization, digital neuronal reconstruction, neuronal reconstruction, neuronal morphology, data sharing, annotation, brain region, neocortex, digital reconstruction, neurogenetics, neurochemistry, neuroscience, neurology, FASEB list

Funding: NINDS R01 NS39600;
MURI ONR N000141010198

Availability: Acknowledgement requested, Public, The community can contribute to this resource

Resource Name: NeuroMorpho.Org

Resource ID: SCR_002145

Alternate IDs: nif-0000-00006

Alternate URLs: http://www.nitrc.org/projects/neuromorpho_org, http://neuromorpho.org/

Record Creation Time: 20220129T080211+0000

Record Last Update: 20250417T065106+0000

Ratings and Alerts

No rating or validation information has been found for NeuroMorpho.Org.

No alerts have been found for NeuroMorpho.Org.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 83 mentions in open access literature.

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

Doherty DW, et al. (2025) Self-organized and self-sustained ensemble activity patterns in simulation of mouse primary motor cortex. bioRxiv : the preprint server for biology.

Nicoletti M, et al. (2024) Biophysical modeling of the whole-cell dynamics of C. elegans motor and interneurons families. PloS one, 19(3), e0298105.

Abdellah M, et al. (2024) Synthesis of geometrically realistic and watertight neuronal ultrastructure manifolds for in silico modeling. Briefings in bioinformatics, 25(5).

Puebla I, et al. (2024) Ten simple rules for recognizing data and software contributions in hiring, promotion, and tenure. PLoS computational biology, 20(8), e1012296.

Huang LW, et al. (2024) Synaptic interactions between stellate cells and parvalbumin interneurons in layer 2 of the medial entorhinal cortex are organized at the scale of grid cell clusters. eLife, 12.

Wheeler DW, et al. (2024) Hippocampome.org v2.0: a knowledge base enabling data-driven spiking neural network simulations of rodent hippocampal circuits. bioRxiv : the preprint server for biology.

Marrett K, et al. (2024) Gossamer: Scaling Image Processing and Reconstruction to Whole Brains. bioRxiv : the preprint server for biology.

Martin KAC, et al. (2024) A strong direct link from the layer 3/4 border to layer 6 of cat primary visual cortex. Brain structure & function, 229(6), 1397.

Wheeler DW, et al. (2024) Hippocampome.org 2.0 is a knowledge base enabling data-driven spiking neural network simulations of rodent hippocampal circuits. eLife, 12.

Wheeler DW, et al. (2024) A Novel Method for Clustering Cellular Data to Improve Classification. ArXiv.

Tecuatl C, et al. (2024) Accelerating the continuous community sharing of digital neuromorphology data. bioRxiv : the preprint server for biology.

Fan Y, et al. (2024) Learning meaningful representation of single-neuron morphology via large-scale pre-training. Bioinformatics (Oxford, England), 40(Suppl 2), ii128.

Blömer LA, et al. (2024) Kinetics and functional consequences of BK channels activation by N-type Ca2+ channels in the dendrite of mouse neocortical layer-5 pyramidal neurons. Frontiers in cellular neuroscience, 18, 1353895.

Chamberland S, et al. (2024) Functional specialization of hippocampal somatostatin-expressing interneurons. Proceedings of the National Academy of Sciences of the United States of America, 121(17), e2306382121.

Leiwe MN, et al. (2024) Automated neuronal reconstruction with super-multicolour Tetbow labelling and threshold-based clustering of colour hues. Nature communications, 15(1), 5279.

Makarov R, et al. (2024) DendroTweaks: An interactive approach for unraveling dendritic dynamics. bioRxiv : the preprint server for biology.

Tecuatl C, et al. (2024) Accelerating the continuous community sharing of digital neuromorphology data. FASEB bioAdvances, 6(7), 207.

Liao M, et al. (2023) Topology recapitulates morphogenesis of neuronal dendrites. Cell reports, 42(11), 113268.

Desai-Chowdhry P, et al. (2023) Neuronal branching is increasingly asymmetric near

synapses, potentially enabling plasticity while minimizing energy dissipation and conduction time. Journal of the Royal Society, Interface, 20(206), 20230265.

Gandolfi D, et al. (2023) Full-scale scaffold model of the human hippocampus CA1 area. Nature computational science, 3(3), 264.