

Resource Summary Report

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NeuriteTracer

RRID:SCR_014146

Type: Tool

Proper Citation

NeuriteTracer (RRID:SCR_014146)

Resource Information

URL: <http://www.nitrc.org/projects/neuritetracer>

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Description: A set of ImageJ plugins for fully automated measurement of neurite outgrowth in fluorescence microscopy images of cultured neurons. The plugin analyzes fluorescence microscopy images of neurites and nuclei of dissociated cultured neurons. Given user-defined thresholds, the plugin counts neuronal nuclei, and traces and measures neurite length. NeuriteTracer accurately measures neurite outgrowth from cerebellar, DRG and hippocampal neurons.

Resource Type: data acquisition software, data processing software, software application, software resource

Defining Citation: [PMID:17936365](#)

Keywords: plugin, data acquisition software, neurite outgrowth, fluorescence microscopy image, neuron

Availability: Available to the research community

Resource Name: NeuriteTracer

Resource ID: SCR_014146

Alternate URLs: <http://fournierlab.mcgill.ca/styled-6/NeuriteTracer.html>

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Record Creation Time: 20220129T080319+0000

Record Last Update: 20260912T195812+0000

Ratings and Alerts

No rating or validation information has been found for NeuriteTracer.

No alerts have been found for NeuriteTracer.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 39 mentions in open access literature.

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

Stevens NA, et al. (2025) Diversity of axon initial segment geometry in the mouse hippocampus and its predicted influence on neuronal excitability. Cerebral cortex (New York, N.Y. : 1991), 35(12).

Lickfett S, et al. (2025) Neuronal branching in stem cell models of mitochondrial and neurological diseases. Stem cells (Dayton, Ohio), 43(11).

Salapa HE, et al. (2024) hnRNP A1 dysfunction alters RNA splicing and drives neurodegeneration in multiple sclerosis (MS). Nature communications, 15(1), 356.

He D, et al. (2024) Loss-of-function variants in RNA binding motif protein X-linked induce neuronal defects contributing to amyotrophic lateral sclerosis pathogenesis. MedComm, 5(9), e712.

Hoffmann C, et al. (2024) From pixels to connections: exploring in vitro neuron reconstruction software for network graph generation. Communications biology, 7(1), 571.

Bianchi M, et al. (2023) Synergy of Nanotopography and Electrical Conductivity of PEDOT/PSS for Enhanced Neuronal Development. ACS applied materials & interfaces, 15(51), 59224.

Olson B, et al. (2021) Chronic cerebral lipocalin 2 exposure elicits hippocampal neuronal dysfunction and cognitive impairment. Brain, behavior, and immunity, 97, 102.

Klimas R, et al. (2021) Dose-dependent immunomodulatory effects of bortezomib in experimental autoimmune neuritis. Brain communications, 3(4), fcab238.

Li S, et al. (2020) Activated Bone Marrow-Derived Macrophages Eradicate Alzheimer's-Related A β 42 Oligomers and Protect Synapses. Frontiers in immunology, 11, 49.

Mondal B, et al. (2020) The histone deacetylase complex MiDAC regulates a neurodevelopmental gene expression program to control neurite outgrowth. eLife, 9.

Miao S, et al. (2020) 4D Self-Morphing Culture Substrate for Modulating Cell Differentiation. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 7(6), 1902403.

Hering TM, et al. (2020) Contributions of Chondroitin Sulfate, Keratan Sulfate and N-linked Oligosaccharides to Inhibition of Neurite Outgrowth by Aggrecan. *Biology*, 9(2).

Matute-Blanch C, et al. (2020) Chitinase 3-like 1 is neurotoxic in primary cultured neurons. *Scientific reports*, 10(1), 7118.

Feuillette S, et al. (2020) A Connected Network of Interacting Proteins Is Involved in Human-Tau Toxicity in *Drosophila*. *Frontiers in neuroscience*, 14, 68.

Zhou ZW, et al. (2020) NBS1 interacts with Notch signaling in neuronal homeostasis. *Nucleic acids research*, 48(19), 10924.

Antinucci P, et al. (2019) Pretectal neurons control hunting behaviour. *eLife*, 8.

Lemaire Q, et al. (2019) Isolation of microglia-derived extracellular vesicles: towards miRNA signatures and neuroprotection. *Journal of nanobiotechnology*, 17(1), 119.

Duellman T, et al. (2018) Nucleic acid-induced potentiation of matrix metalloproteinase-9 enzymatic activity. *The Biochemical journal*, 475(9), 1597.

Bustos F, et al. (2018) RNF12 X-Linked Intellectual Disability Mutations Disrupt E3 Ligase Activity and Neural Differentiation. *Cell reports*, 23(6), 1599.

Zakirova Z, et al. (2018) Mutations in THAP1/DYT6 reveal that diverse dystonia genes disrupt similar neuronal pathways and functions. *PLoS genetics*, 14(1), e1007169.