Resource Summary Report

Generated by RRID on May 22, 2025

NEuronMOrphological analysis tool

RRID:SCR_006304
Type: Tool

Proper Citation

NEuronMOrphological analysis tool (RRID:SCR_006304)

Resource Information

URL: http://www.centropiaggio.unipi.it/software

Proper Citation: NEuronMOrphological analysis tool (RRID:SCR_006304)

Description: Software to handle and process large numbers of optical microscopy image files of neurons in culture or slices in order to automatically run batch routines, store data and apply multivariate classification and feature extraction using 3-way principal component analysis (PCA). This freeware for semi automated quantitative and dynamic analysis of neuron morphometry incorporates the most important microstructural quantification methods, such as fractal and sholl analysis with statistical and classification tools to provide an integrated image processing environment which enables fast and easy feature identification. It includes: * Friendly interactive graphical user interface * Image pre-processing * Morphological analysis * Topological analysis * Cell counting * 3-way PCA analysis (also available as an ImageJ plugin) * Plot of variables Sequential images of labeled or unlabelled neurons or tissue slices can be uploaded batch-wise in order to create a 3 axis (time, image coordinate) data base and a datamatrix of variables for 3-way Principal Component Analysis*.

Abbreviations: NEMO

Synonyms: NEuronMOrphological analysis tool NEMO, NEMO (NEuron MOrphological analysis tool)

Resource Type: image analysis software, software resource, image processing software, software application, data processing software

Keywords: morphometric analysis, neuron, morphology, principal component analysis, image pre-processing, neuron reconstruction, morphological analysis, neuron counting, neuron morphology, image processing, morphometrics, 3-way principal component analysis,

topological analysis

Funding:

Availability: Open-source

Resource Name: NEuronMOrphological analysis tool

Resource ID: SCR_006304

Alternate IDs: nlx_151981

Record Creation Time: 20220129T080235+0000

Record Last Update: 20250521T061103+0000

Ratings and Alerts

No rating or validation information has been found for NEuronMOrphological analysis tool.

No alerts have been found for NEuronMOrphological analysis tool.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 5 mentions in open access literature.

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

Meyer P, et al. (2017) A model of the onset of the senescence associated secretory phenotype after DNA damage induced senescence. PLoS computational biology, 13(12), e1005741.

Mattei G, et al. (2015) Profile analysis of hepatic porcine and murine brain tissue slices obtained with a vibratome. PeerJ, 3, e932.

Bayindir I, et al. (2015) Transcriptional Pathways in cPGI2-Induced Adipocyte Progenitor Activation for Browning. Frontiers in endocrinology, 6, 129.

Billeci L, et al. (2013) NEuronMOrphological analysis tool: open-source software for quantitative morphometrics. Frontiers in neuroinformatics, 7, 2.

Mompart F, et al. (2013) 3D organization of telomeres in porcine neutrophils and analysis of LPS-activation effect. BMC cell biology, 14, 30.