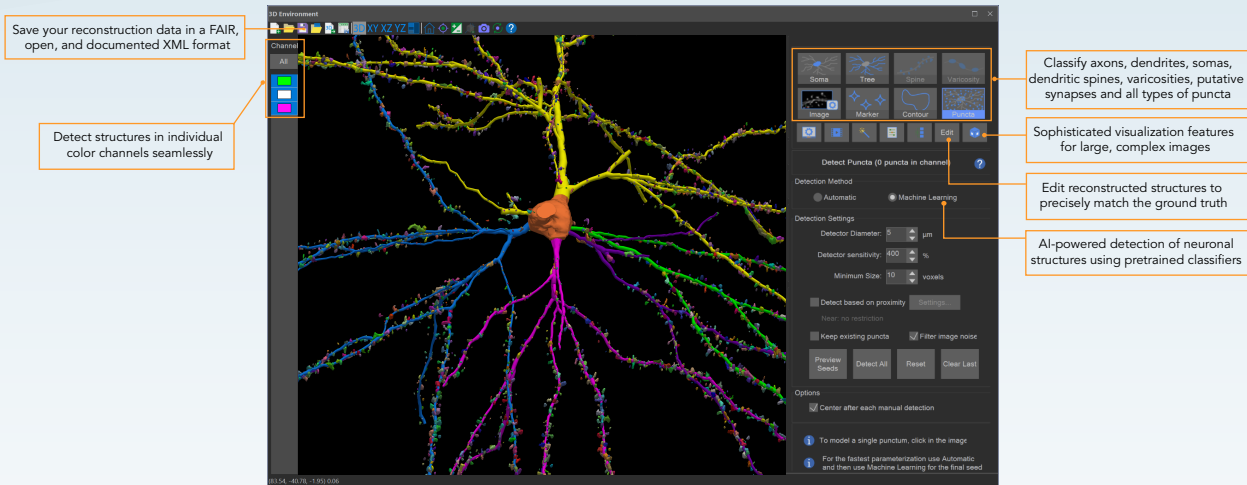


# Neurolucida® 360

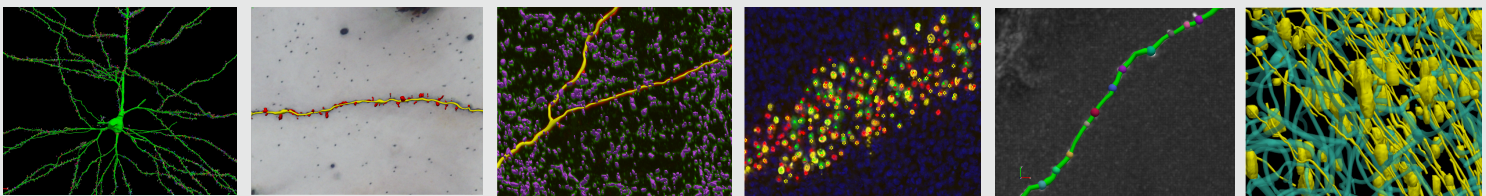
The Most Accurate Neuron Reconstruction and Quantification Software



Reconstruct and quantify complex neuronal morphology - from any species



Advance your research with specialized, AI-enhanced algorithms for comprehensive microscopy image data analysis



Neurons and Glia

Dendritic Spines

Puncta

Cell Detection

Axonal Varicosities

Microvasculature

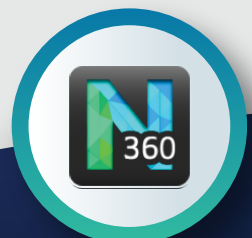
## Automatic Neuron Tracing to Your Specifications

- Create reconstructions quickly using easy-to-configure automatic detection tools and intelligent machine-learning algorithms
- Automatically detect dendritic spines and classify them by morphological type
- Detect colocalized puncta, e.g. pre-synaptic markers, etc, by proximity to cells, neuronal, glia, and vascular structures
- Automatically process and trace multiple microscopy image data files at once using the intuitive batch pipeline tool
- Work dynamically with large images in manageable sub-volumes, cut planes, and partial projections for better visualization

Neurolucida 360 is the premier software used by neuroscientists to quickly and accurately reconstruct any neuron from any species using a wide variety of labeling and microscopy techniques. With the most advanced 3D image detection algorithms coupled with machine learning techniques, Neurolucida 360 performs accurate reconstruction of neuronal structures that range in scale from complex, multicellular neuron networks, to sub-cellular neuronal components such as dendritic spines, varicosities and putative synapses. This comprehensive software also includes methods to analyze glial cells such as oligodendrocytes, microglia, and astrocytes.

The ability to work with a wide array of image types allows you to use microscopy, histological and visualization techniques that fit your research paradigm. 2D and 3D microscopy images from brightfield, confocal, two-photon, multichannel fluorescence, and light sheet microscopes are all compatible. Neurolucida 360 includes state-of-the-art high-performance image and data handling engines that take full advantage of your computer resources to load large complex images up to 5000x faster than before.

Learn more: [mbfbioscience.com/products/neurolucida-360](https://mbfbioscience.com/products/neurolucida-360)



# Neurolucida® Explorer

## Turn Your Data into Results



### Quantitative Analysis of Morphological Data from Neurolucida 360

Neurolucida Explorer is the included analytical software companion. Use it to perform extensive morphometric analysis on neuron reconstructions, serial section reconstructions, and brain or organ maps.

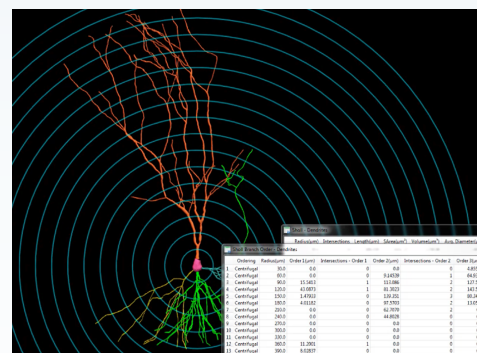
### Not Just Numbers

Access dozens of neuroanatomical morphometric analyses to characterize thousands of parameters using Neurolucida Explorer.

- Examine the structure, spatial distribution, and orientation of neurons with visual analyses such as Sholl, convex hull, polar histogram, and more
- Obtain granular and global measurements of length, diameter, and volume of complex arbors, dendritic spines, and synapses
- Investigate colocalization and nearest neighbor analyses of numerous sub-cellular structures
- Display results in comprehensive quantitative data tables that you can easily export to statistical and spreadsheet software
- Automatically generate graphical displays to visualize quantitative results in intuitive ways. Easily turn high-quality displays into figures for publications and presentations

### A Mountain of Data without the Data Overload

- Find answers in your data and present to others using Neurolucida Explorer
- Use comprehensive editing tools on the most challenging specimens to create the most accurate reconstructions and ground truth data
- Collect data more efficiently by obtaining meaningful metrics across multiple files simultaneously



Learn more: [mbfbioscience.com/products/neurolucida-explorer](http://mbfbioscience.com/products/neurolucida-explorer)



## About MBF Bioscience

A rich history of creating the future of neuroscience.

MBF Bioscience is a leader in neuroscience research technology. We develop cutting-edge tools that enable scientists to collect and analyze data from fixed tissue and living organisms with high precision and accuracy. This data helps scientists understand brain diseases and processes at the system, cellular, and subcellular levels.

Our products have been used in over 17,000 peer-reviewed papers.

## What our customers say

“Neurolucida 360 is clearly the best in the field - reliable, accurate, and very importantly, easy and intuitive to use. I would not try any other system.

Jeffrey Kordower, Ph.D.  
Rush Presbyterian Medical Center

“Neurolucida 360 is very useful for doing quantitative analysis of neuronal morphology.

Yun Wang, Ph.D.  
Allen Institute for Brain Sciences

