

Vesselucida® Microscope Edition

Model and Quantify Microvasculature Accurately

Vesselucida Microscope Edition is a unique product specifically designed to reconstruct and analyze microvascular networks by controlling microscope hardware so you can trace directly from slides. Built-in analysis tools will provide you with the information you need for your studies on cancer, diabetes, strokes and other conditions that affect microvasculature.

Quantify:

- ☒ Changes in vasculature due to traumatic brain injury or stroke
- ☒ Changes in blood vessels of the retina due to diabetes (diabetic retinopathy)
- ☒ New blood vessels due to a cancerous tumor (angiogenesis)

See why Vesselucida Microscope Edition revolutionizes microvasculature reconstruction and analysis!

[Request a Consultation](#)

(<https://www.mbfbioscience.com/request-consultation-vesselucida-microscope-edition>)

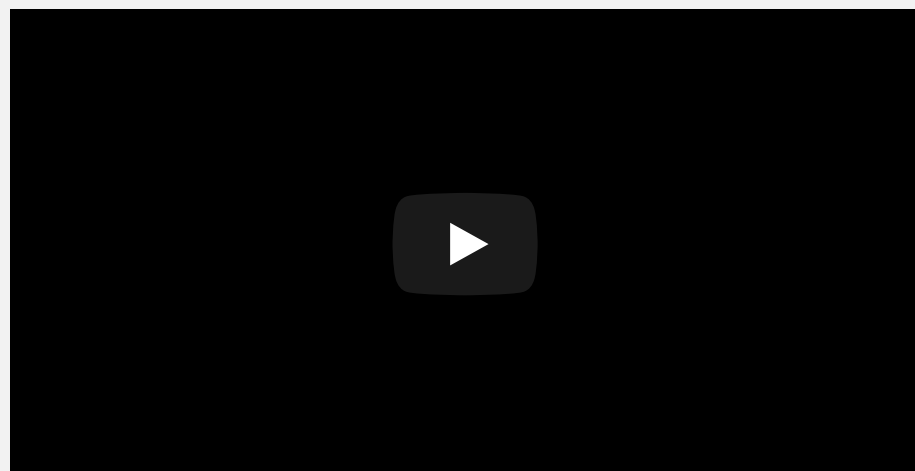
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A Comprehensive Solution to Analyze Microvasculature

Vesselucida Microscope Edition works with a wide array of 2D and 3D images, even large 2D and 3D images of intact tissue specimens. Once your reconstruction is complete, you can obtain a comprehensive morphological profile.

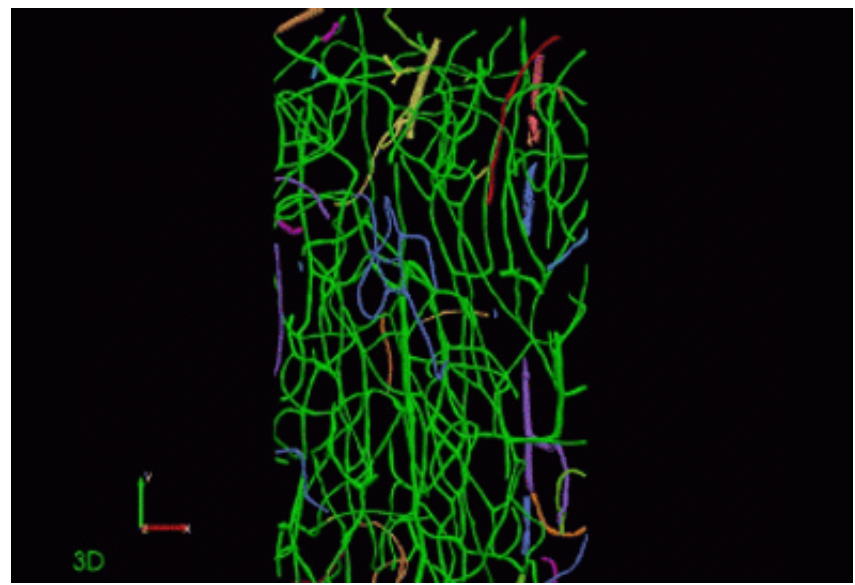
- ☒ Reconstruct microvascular structures in 3D accurately and fast
- ☒ Built-in analyses means no need for programming skills or the creation of supplementary scripts (e.g., MatLab)
- ☒ Metrics for comprehensive morphological analyses: Segments and nodes counts, frequency of anastomoses, vessel surface and volume, and more
- ☒ Consult with our staff scientists to determine the best course of action to make sense of your data



Metrics to Answer Your Research Questions

Our rigorously tested analyses provide accurate and robust results that you and others can trust for publications. Use Vesselucida Explorer, Vesselucida Microscope Edition companion analysis software, to perform sophisticated analyses that help answer your research questions.

Vesselucida Explorer provide vasculature-specific metrics such as segments and nodes counts, frequency of anastomoses, vessel surface and volume, and more.



Vesselucida on a Microscope

Microscopy hardware and Vesselucida software work in harmony to deliver a powerful, seamless vessel reconstruction system. A typical system includes a microscope, computer, and Vesselucida software. Most of what is visible through the oculars is displayed on the computer monitor with Vesselucida.

Vesselucida fully integrates with your microscope and associated hardware to reduce manual work and to speed up data collection. It can:

- ☒ control motorized stages
- ☒ control cameras to change or save settings for future use
- ☒ operate the focus knob or change objectives
- ☒ change filter turrets, filter wheels, and mirror cubes when acquiring fluorescent images or image stacks
- ☒ it can support almost all [file formats](https://www.mbfbioscience.com/sites/default/files/fileFormats2020.pdf)
(<https://www.mbfbioscience.com/sites/default/files/fileFormats2020.pdf>)

- Are you looking to do automatic 3D microvascular reconstruction and image analysis? Check out [Vesselucida 360](https://www.mbfbioscience.com/vesselucida360)
(<https://www.mbfbioscience.com/vesselucida360>)

Can I upgrade my existing microscope hardware?


- ☒ There are two main options when purchasing a Vesselucida Microscope Edition system:
 1. Purchase a brand new system
 2. Upgrade existing microscope hardware
- ☒ We typically provide complete turn-key systems include all of the hardware, software and services you will need for your new system.
- ☒ If you already have an existing microscope, motorized stage, or camera that you would like to use in a new system, we are happy to help you determine if it would be appropriate to integrate it into a new system rather than purchase all new hardware.
- ☒ All of our Vesselucida Microscope Edition systems are custom configured based on the specific research needs of each customer.

Contact Us






(<https://www.mbfbioscience.com/system-upgrade-vesselucida-microscope-edition>)

What are the differences between Vesselucida Microscope Edition and Vesselucida 360?

| | Vesselucida Microscope Edition | Vesselucida 360 |
|--------------------------------|--|---|
| Description | Manually reconstruct vasculature from tissue specimen on a microscope | Automatically reconstruct vasculature from images and image stacks. |
| Type of imaging | MicroCT, and other brightfield stains and fluorescent labeling. | Confocal, two-photon, widefield fluorescence, brightfield images, microCT, light sheet and expansion microscopy |
| Image acquisition capabilities | Can acquire 2D images, 3D image stacks, and whole slide images. | No image acquisition capabilities. |
| System hardware | <ul style="list-style-type: none">• Research microscope• Windows PC | <ul style="list-style-type: none">• High-performance windows PC |

 To learn more about Vesselucida 360 click [here \(http://www.mbfbioscience.com/vesselucida360\)](http://www.mbfbioscience.com/vesselucida360).

Each Vesselucida Microscope Edition System We Configure Is:

-  Based upon your specific research needs. We can provide all necessary hardware.
-  Fully integrated – Vesselucida controls motorized stages, cameras, filter wheels etc.
-  Scalable, so it fits your budget and allows room for additional capabilities via our imaging modules and hardware upgrades.
-  Supported by our team of scientists and technicians who are experts in research software and laboratory hardware. Our scientists also can help you design your study.
-  Upgradable to new software versions that are released regularly.

Vesselucida Microscope Edition has been developed with support from the National Institute of Mental Health (NIMH)

+ [Learn more about microvessel analysis \(https://www.mbfbioscience.com/microvessel-analysis\)](https://www.mbfbioscience.com/microvessel-analysis)

Designed by Scientists for Scientists

Developed with support from the National Institute of Mental Health (NIMH), Vesselucida was specifically conceived for researchers focused on conditions affecting microvasculature. Our scientists are regularly in dialogue with our customers, incorporating their suggestions into the design of Vesselucida Microscope Edition. Consult with our staff scientists to determine the best course of action to make sense of your data.

Professional Technical Support

When you call us you will speak with a person - not an automated system. Talk to us about your hardware, software, or experimental design questions. Our team includes Ph.D. neuroscientists and experts in microscopy, stereology, neuron tracing, and image processing; ready to help you over the phone or online.

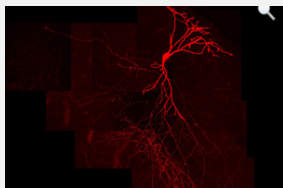
Customer Reviews

"The support team at MBF Bioscience has been great to work with. As a beta test site for Vesselucida, we are in constant communication. Their staff is professional & responsive to the problems we have identified & our requests for specific applications."

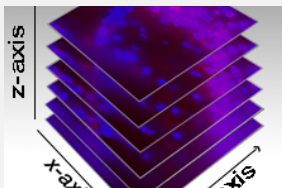
-Rebecca Shaw, Research Specialist.
University of Missouri



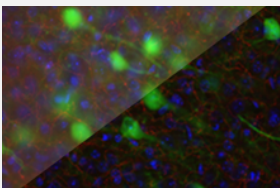
Vesselucida Microscope Edition Add-On Modules



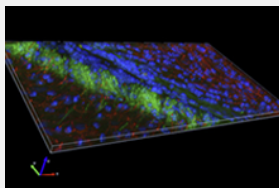
[Image Montaging \(/image-montaging\)](/image-montaging)



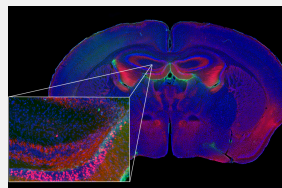
[Image Stack \(/image-stack\)](/image-stack)



[Structured Illumination \(/structured-illumination\)](/structured-illumination)



[3D Slide Scanning \(/3d-slide-scanning\)](/3d-slide-scanning)



[2D Slide Scanning \(/2d-slide-scanning\)](/2d-slide-scanning)

Contract Services for Vessel Reconstruction

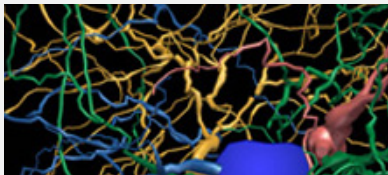
Our Vessel Reconstruction services gives your lab the ability to have industry-leading experts create a 3D reconstruction of microvasculature, for your research MBF Labs will reconstruct your microvasculature giving you a breadth of quantitative including length, volume, connections, and the complexity of the micro vessels. By providing us with slides or images, our experts at MBF Labs are able to quantify changes in vasculature derived from traumatic brain injury, stroke, changes in blood vessels of the retina due to diabetes, new blood vessels due to a cancerous tumor.



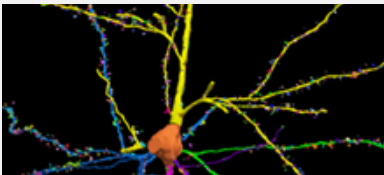
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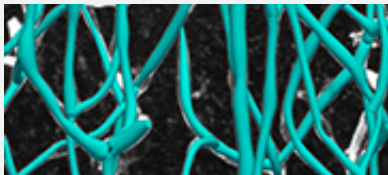
Related Products



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[Neurolucida 360 \(/neurolucida360\)](/neurolucida360)



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