



Vesselucida® 360

Release Notes

Version 2021.1.1

NEW FEATURES AND ENHANCEMENTS

MBF Bioscience software has been rebuilt to maximize efficiency and speed in image and data handling. Load, display, and process your files faster than before due to intelligent image loading, concurrent usage of CPU cores, multiple levels of data caching, and efficient use of RAM and GPU resources.

You'll see improvements throughout Vesselucida 360 software; highlights include:

- Images and data files load noticeably faster than in previous releases.
- Vesselucida 360 software handles hundreds of thousands of data points simultaneously; you'll notice that it is more responsive than previous versions.
- Image adjustments are immediately displayed in both the 2D and 3D windows—without clicking any buttons.
- Multiple options are available to indicate how you want Vesselucida 360 software to handle and display your images.
- Drag and drop file opening is easier and more powerful with the new Image Opener window.
 - Open all images in supported container files such as Leica .lif and Zeiss .czi formats.
 - Choose to display in a grid, stack images, or display on top of each other without stacking.
- Puncta detection in the 3D environment. The new tool includes the option to use powerful new machine learning technology for accurate puncta detection.
- Color channel selection in the 3D Environment via a new Channel panel enables you to select one or more color channels to view, hide, and associate with data elements in your images.
- You can now associate traced structures with a specific color channel—With multicolor images, select a single color channel for display in either the Channel panel (3D), or the Image Adjustment panel (2D), to assign any structures traced while the selection is active to that specific color channel.
- New subvolume function in the 3D environment enables you to easily and systematically focus on portions of images/image stacks. This replaces the large volume reconstruction feature present in previous releases.
- Easier software authorization: Vesselucida 360 software autofills the online Authorization Request Form with information about your computer system. Just fill in a few fields with information about you and your lab to submit the form.
- A new image montage feature that considers image names in the 3D image-alignment process
- More options for selecting markers, contours, or vessels with the new Freehand Selection tools.
- An additional option in the right-click menu for selecting contours in Trace mode: Select everything of this contour type.
- Updated Illumination Correction feature.
- A new clip tracing feature when using image slice, partial projection and subvolume allows the user to filter the tracing to display only the area of image being viewed.

SPARC Users

- The institution and application Research Resource Identifiers (RRID) are recorded in every xml data file.
- New tools for updating a data file or multiple data files at once with the most recent anatomic terms from the SciCrunch database are now available.
- New Quick surface tool partially automates the process of creating contours to map interior and exterior surfaces.
- New Import 3D model tool to import and visualize generic organ scaffolds right in the 3D environment.

ISSUES RESOLVED

Vesselucida 360 3D environment

- Improved synchronization with the 2D environment
- Improved the shell display of contours
- Improved display when using partial projection mode
- Fixed issue with point connection editing
- Improved 3D window resizing
- Improved automatic tracing ability to create accurate connections

Vesselucida 360 overall

- Multiple image format display issues resolved
- Updated editing options
- Improved export functionality
- Improved Batch Filter functionality
- Fixed issue with Marquee around the current image
- Fixed issue attaching internal markers to complex contours
- Updated help links
- Resolved issue with closing multiple docked windows