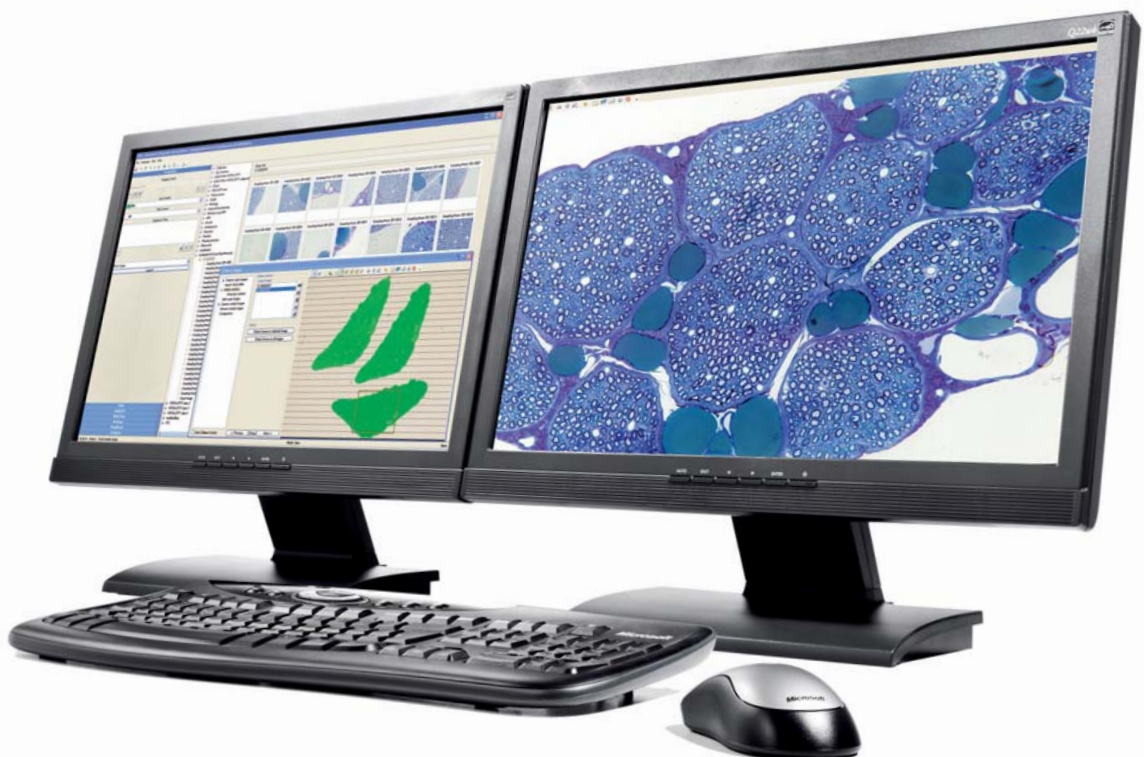


Powerful and flexible sampling solutions for microscopy

MicroImager™ by Visiopharm



Intelligent control of automated imaging

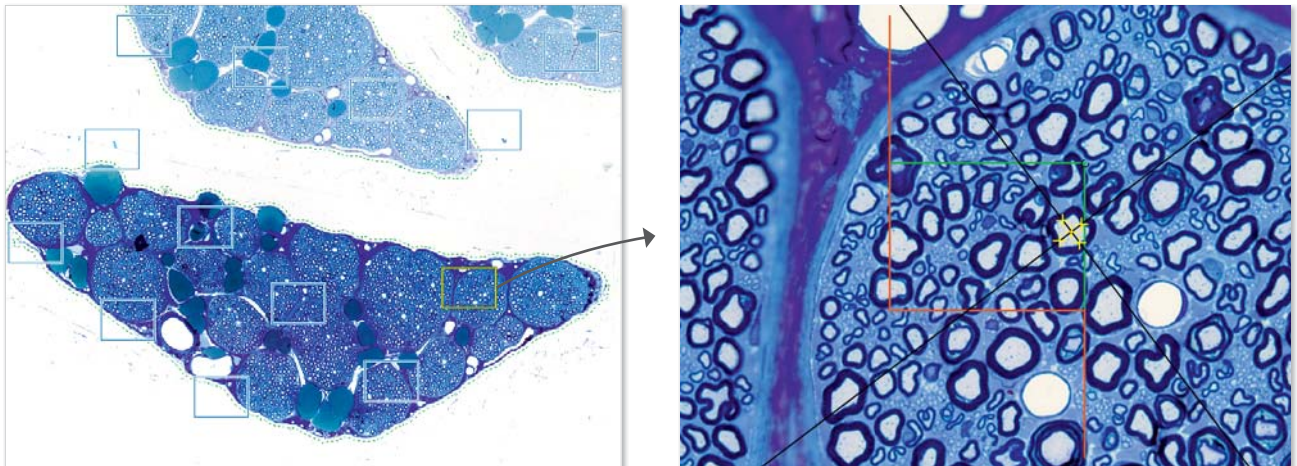
STREAMLINING IMAGE ACQUISITION FOR QUANTITATIVE MICROSCOPY

With the advent of high through-put slide loaders and high content samples, such as tissue micro arrays and stereology sections, the need for convenient and flexible software acquisition tools has never been greater. With MicroImager™, time spent setting up comprehensive acquisition and sampling regimes is minimized.

MicroImager™, as a platform, extends capabilities across a number of challenging acquisition and analysis environments and is ideal for those needing to establish a sound base to build further solutions upon as experimental demands grow.

The imaging process employs auto focusing with color and background correction to ensure focus and color balance is maintained. The system enables systematic uniform random sampling to save time and effort spent in analysis, without introducing bias to your measured results.

Sets of systematically random sampled images are suitable for stereology and image analysis, offering versatility in the choice of quantitative endpoints. High through-put analysis is not only achievable but will become a laboratory standard.



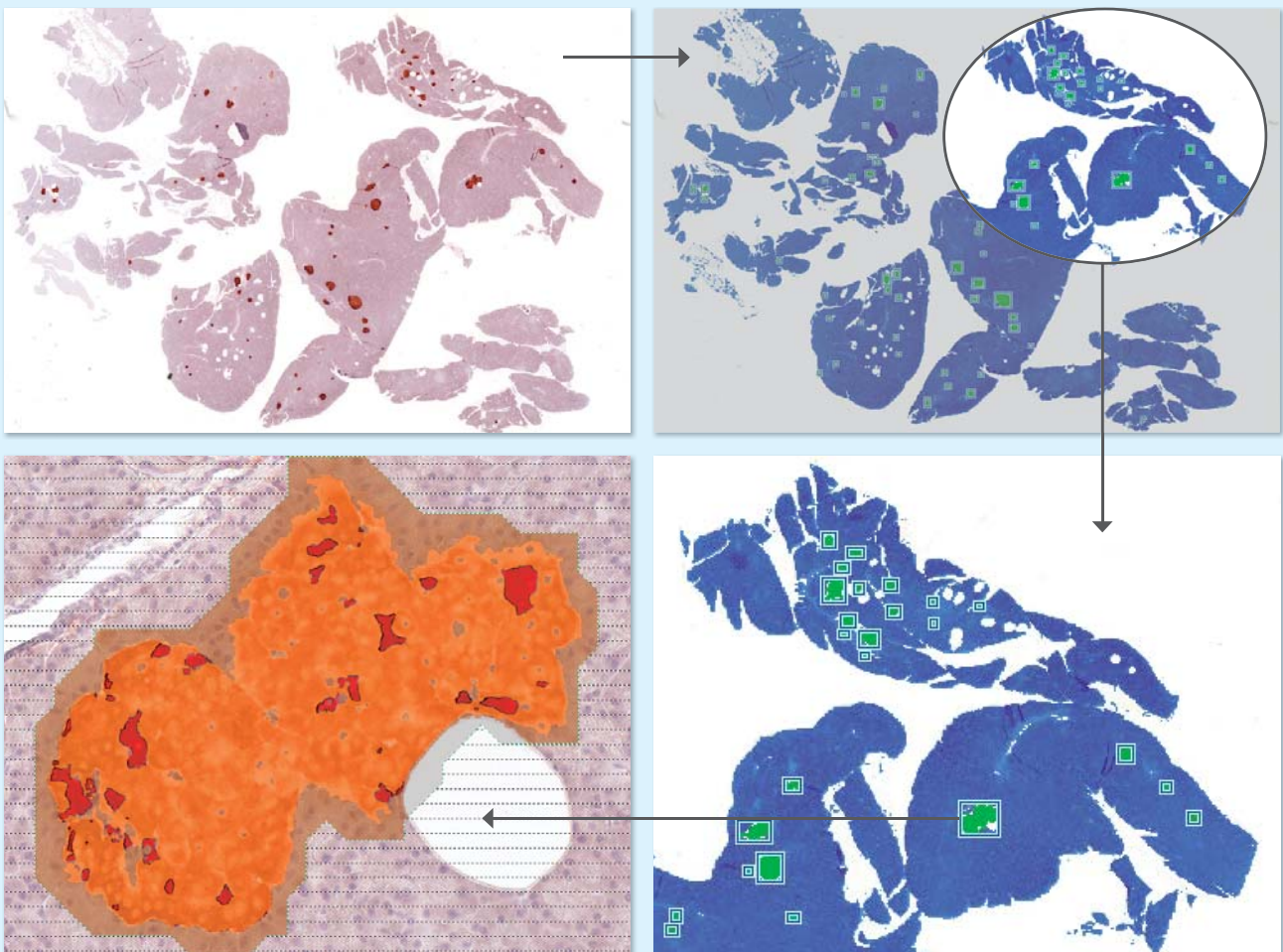
Example: Number and size of peripheral nervefibres

Stereological quantification of the number and size of peripheral nervefibres requires efficient systematic uniform random sampling of high magnification images. Here, MicroImager™ is used in a microscope platform for unattended acquisition of series of 100x oil images. Subsequently, an off line stereological analysis, applying the unbiased counting frame and planar nucleator, is performed using the Visiopharm stereology module, NewCAST™.

How does it work?

COMPLETE WORKFLOW CONSISTS OF FIVE STEPS

1. **Create Super Images** – Automatic acquisition of overview images for all slides mounted on the stage or a collection of virtual slide files
2. **Define Sections** – Automatic or manual detection of regions for sampling in all slides
3. **Select Imaging Method** – Use systematic uniform random sampling to sample a fraction of a region as individual images, stitched images or z-stacks, or perform complete scanning of entire regions at high magnification
4. **Start automated imaging** – Perform fully unattended image capture on all requested slides, populating the integrated image database with series of images. With the Visiomorph™ module, the sampled images can be analyzed during capture and the results stored with the images
5. **Review Sample Images** – Quickly review the sampled images with an option to automatically retake individual images if necessary



Example: Quantification of cell distribution in the islets of Langerhans

For automated analysis of the specific composition of Langerhans islets, the pancreatic tissue is automatically outlined and the Langerhans islets detected, using a Visiomorph™ protocol in MicroImager™. Series of high magnification images of Langerhans islets are acquired unattended, creating stitched images from large islets. The high magnification images are, on the fly, subjected to image analysis to discriminate specific cell types within the islets leading to the final quantitative output.

TRAINING AND SUPPORT

Besides on-site installation and training, Visiopharm offers on-line support, allowing our experts to quickly assist in real time in developing Standard Operating Procedures and analysis protocols, guiding users every step of the way

HARDWARE COMPATIBILITY

Visiopharm provides systems fully configured with all hardware components, but we can also help you to retrofit to your existing system.



Visiopharm technology is designed to facilitate every step in the work-flow from prepared tissue sections to scientifically valid quantitative end-points reflecting important tissue properties.

Fully compatible with all the leading hardware brands.

Microscopes:	Leica, Nikon, Olympus (incl. DSU), Zeiss
Whole Slide file formats:	Aperio (Scanscope), Hamamatsu (Nanozoomer), 3DHISTECH (Pannoramic), Zeiss (Mirax), Leica (SCN400), Olympus (dotSlide and VS110)
Motorized stages:	Ludl, Märzhäuser, and Prior
Slide loaders:	Ludl
Camera:	Olympus, Hamamatsu, Basler, Leica, QImaging
PC:	Microsoft Windows XP™, Vista™ and 7™

Please see our latest hardware integration at:
<http://www.visiopharm.com/page-04-00.shtml>

MORE INFORMATION

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