OptiScan

Flexible Preclinical Research In Vivo Imaging

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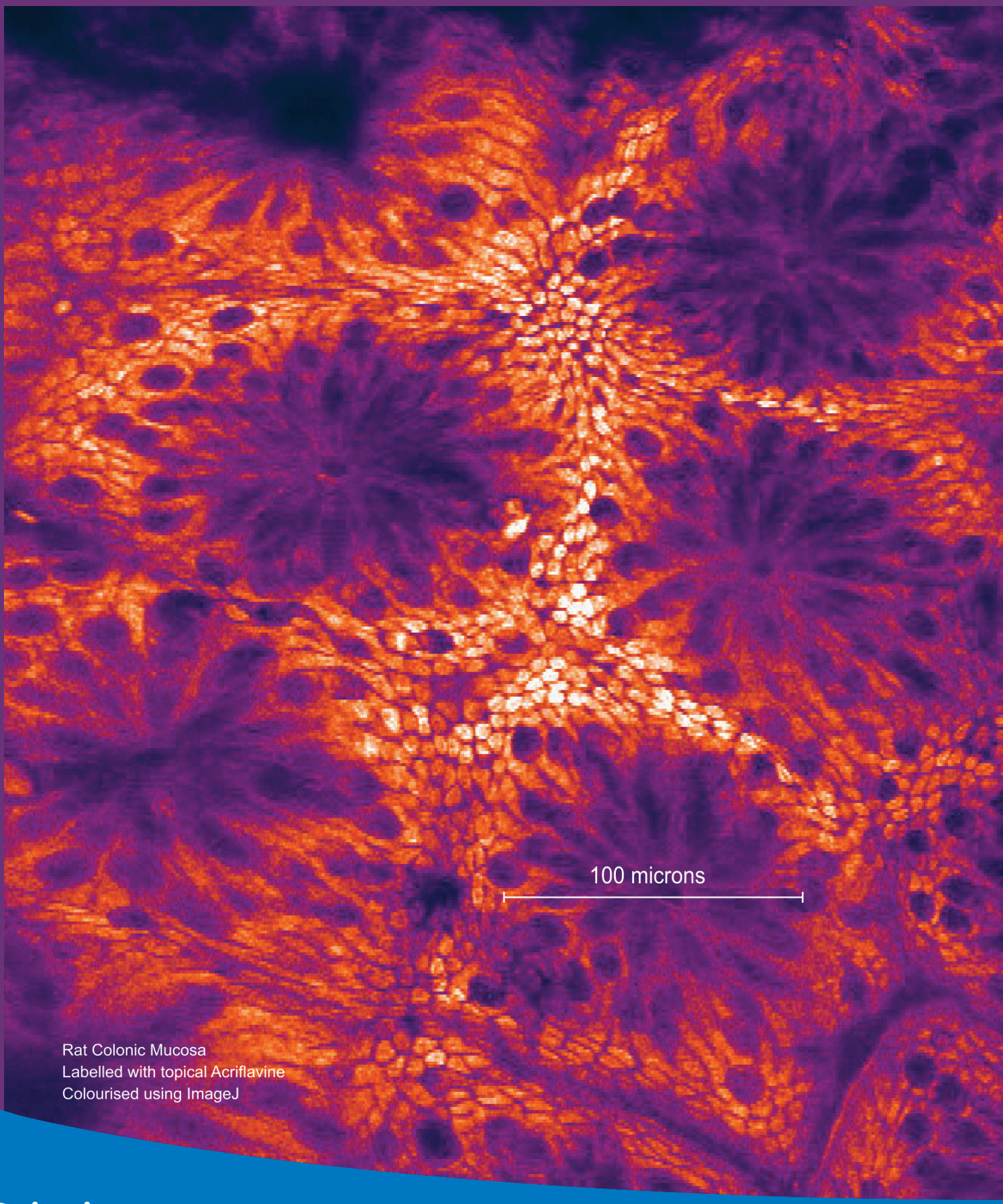
ViewnVivo



Rat Colonic Mucosa
Labelled with topical Acriflavine
Colourised using ImageJ

ViewnVivo
Puts you in Control

Research: “the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.” Source Google

No Probe Change Required

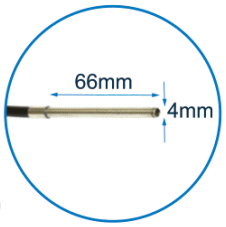
You won’t need to change probes within a procedure, although you can change the probe form factor to suit the investigation without the need to restart the system. **Unlike other technologies, with View*n*Vivo you can dynamically adjust imaging parameters using a single probe** enabling uninterrupted imaging.

Multiple Probe Form Factors

Choose the Probe form factor that suits your application without sacrificing imaging quality, sensitivity or imaging depth. Each probe is fitted with a strong umbilical cable to reduce the chance of damage.

Available sizes:
46mm x 4mm (Optional)
66mm x 4mm (Standard)
300mm x 4mm (Optional Laparoscope)

(Please contact Optiscan for other options)



Any Angle of Approach

Whether you hold the probe in your hand or utilise the adjustable holder and micro positioners with the animal stage, you can approach your animal model at any angle to optimise imaging. Try doing that on a Benchtop microscope.

Low Level Laser Power

Obtain the optimal image through variable laser power and automatic brightness control, without bleaching your specimen.

Full Screen Output

High Resolution 1080p output at variable aspect ratios.

Field of View

A wide field of view at full resolution (475µm x 475µm), and selectable resolution lossless zoom, combined with benchmark optical resolution within a single probe without compromise.

Scan Speed

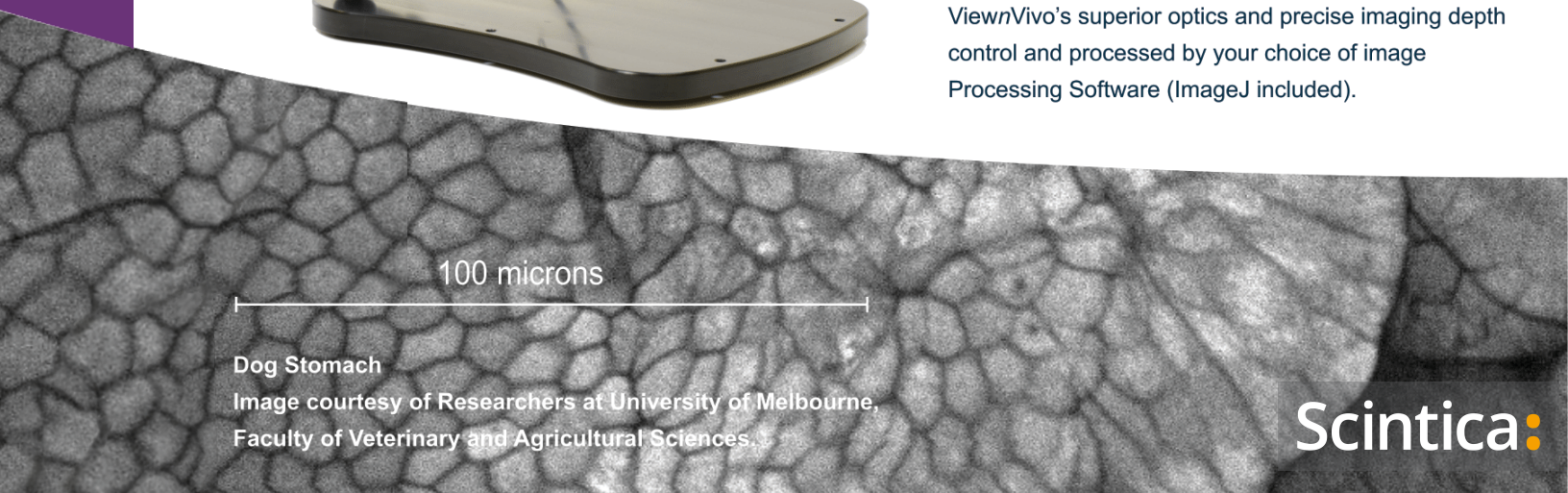
Capture just the right amount of detail. Scan at the speed required for the task at hand and adjust as required up to 6 fps.

On-demand and Automated Image Capture

Never miss an Image. Capture Images and their associated meta-data on-demand even if your hands are full, or automatically as a series of image depths (z-stack). Images can even be captured retrospectively from the live image stream through the ‘roll-back’ functionality.

3D Visualisation

Building and analysing 3D Visualisations starts with non-proprietary images and meta-data captured through View*n*Vivo’s superior optics and precise imaging depth control and processed by your choice of image Processing Software (ImageJ included).



Dog Stomach
Image courtesy of Researchers at University of Melbourne, Faculty of Veterinary and Agricultural Sciences.

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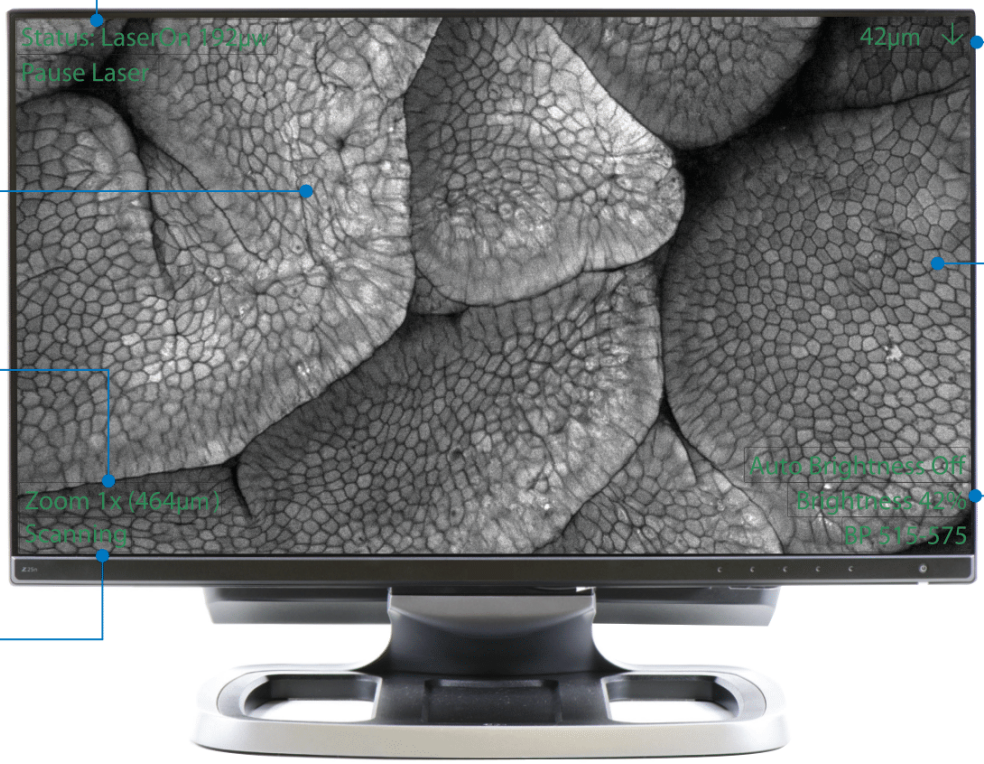
View*n*Vivo gives you the control and flexibility you need to get to the highest quality outcome as quickly as you can, and before someone else does.



Precise Depth Control

Interactive and continuously variable depth control (z-axis) 0 - 400µm **without the need to change the probe,** provides precise optical sectioning and enables the isolation and capture of the structures and detectable events. Simply position the probe once and capture all of the images you need.

Flexible Control

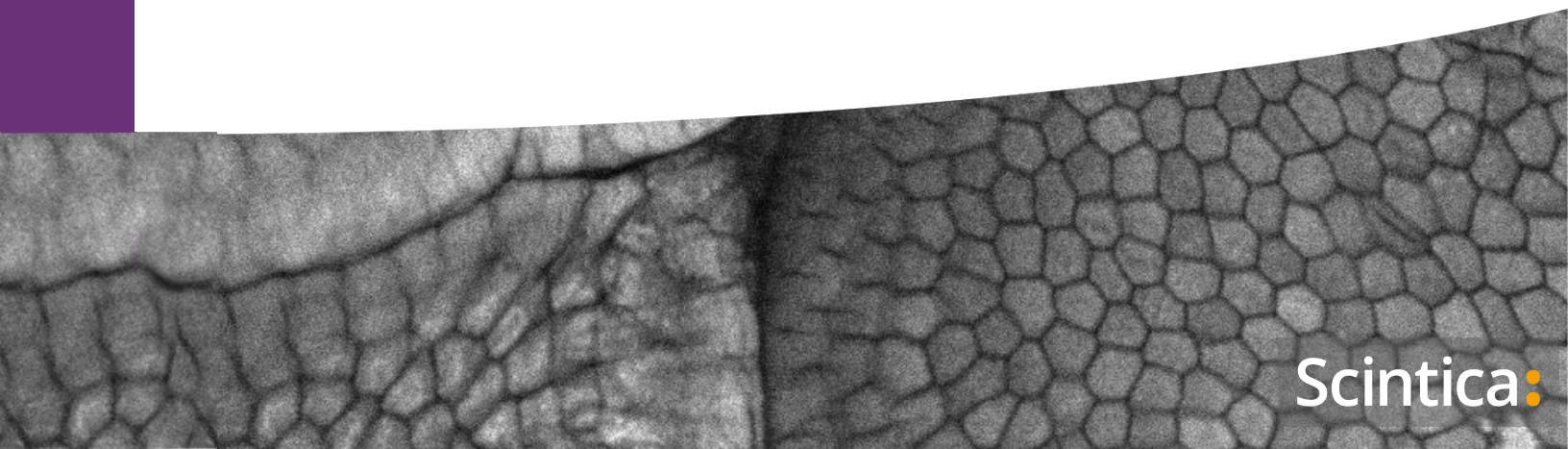
Optiscan understands that in a real-life situation you need flexibility. Users can choose to interact with the system in multiple ways to support different workflows and protocols depending on their preference and the current interrogation. Using System control buttons, Mouse, Keyboard, Footswitch or an optional Touch Screen you can change settings and capture optimal images, even if your hands are full.

Productive in minutes

To get the most out of your View*n*Vivo you don't need a dedicated technician, therefore enabling the broadest and most flexible use to achieve outcomes quickly and at a lower cost. **The self-calibrating system and probes let you turn it on and use it.**

Filter Selection

Change Filters on the fly to pinpoint and highlight the colour range of interest. With 8 standard filters to suit the most common fluorescent contrast agents and molecular markers, and provision for up to 4 custom filters, View*n*vivo enables your research protocol.



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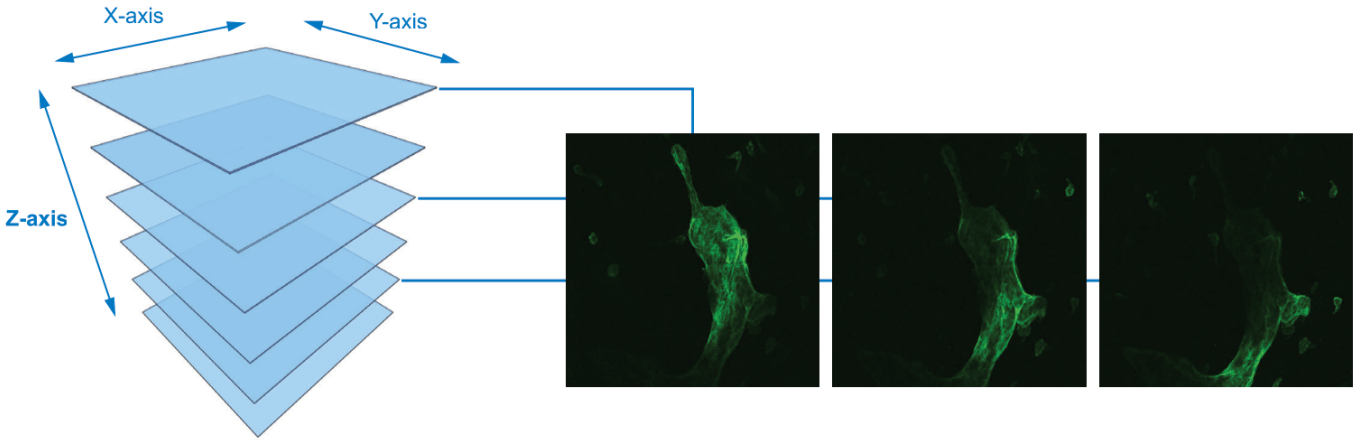
Optical Sectioning

Interrogate and analyse tissue as a truly 3D microscopic volume, without moving or changing the probe.



Simply position the probe once and through the use of the interactive and continuously variable depth control (z-axis) you can capture all of the images you need as Optical sections and generate 3D visualisations that allow you to study and analyse your discovery.

View*n*Vivo B30 Specification Summary

Imaging Resolution:	< 0.5µm lateral; <4.5µm axial
Imaging Depth:	0 - 400µm (without moving or changing the probe)
Z-Step:	3µm (precision 1µm)
Field of View:	475µm x 475µm at full resolution plus zoom
Wavelength:	488nm
Probe Outer Diameter:	4mm
Standard Probe Length:	66mm (straight rigid) – others available
Probe Cable Length:	1,500mm
Filter Wheel:	12 Position (8 Standard filters included)
Image Capture:	Single Frames, Z-Stacks and [retrospective] Roll-back
Image Output:	TIFF and Multi-page TIFF with embedded Meta-data

Canine Small Intestine
Image courtesy of Researchers at University of Melbourne, Faculty of Veterinary and Agricultural Sciences.

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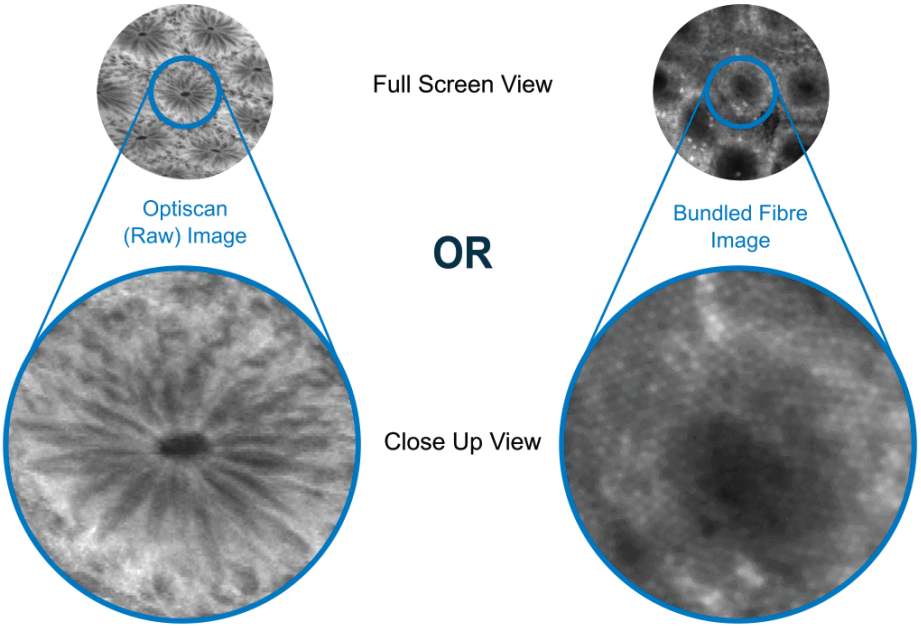
Patented Technology

Optiscan's patented Point Scanning Confocal technology provide's far superior image quality than 'Bundled Fibre' technology (the alternative miniaturised technology). As can be seen from the example images below Bundled Fibre technology captures an image that resembles looking through the door of a microwave oven, i.e. it is missing information, whereas Optiscan's Point Scanning Confocal technology captures a full and complete raw image.



You can't create what does not exist. Information missing in a raw captured image cannot be created with image processing. Don't settle for half the picture; use View*n*Vivo.

In Vivo imaging accelerates your reasearch

Now you can have the best of both worlds; stunning real-time in vivo images and the flexibility enabled by miniaturisation. View*n*Vivo enables endless possibility by unlocking the ultimate and most direct observations of system biology to help you reach your objective quickly.

Open your world of possibility with View*n*Vivo

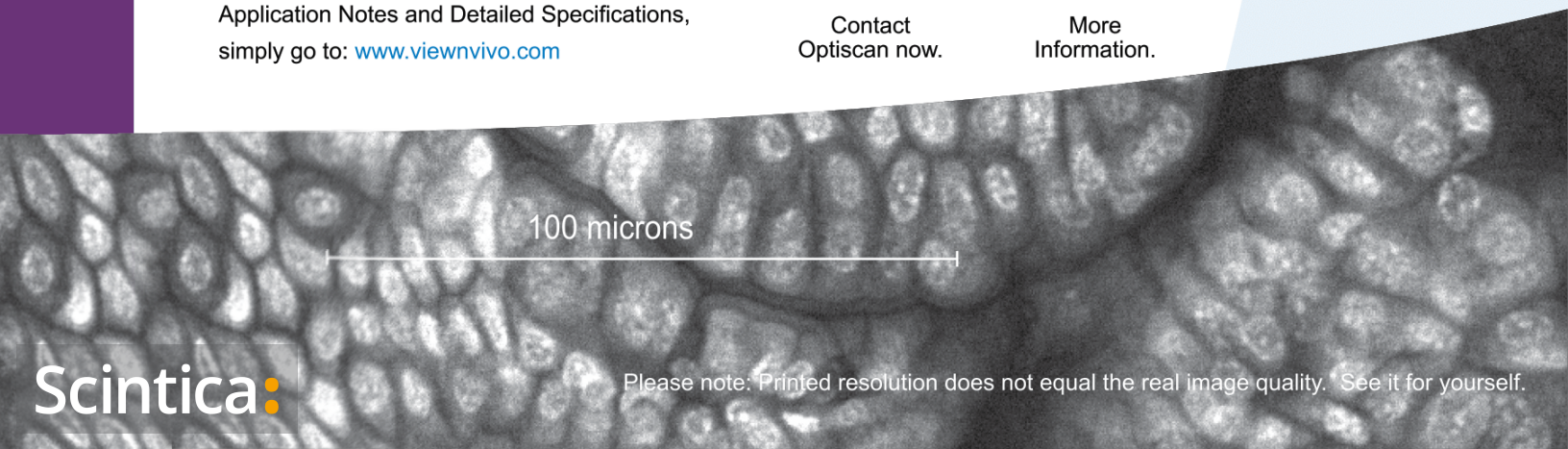
Don't let your scientific endeavours fall behind, or let someone else be your defining factor.
Create your own legacy starting today by seeing how View*n*Vivo can take you there.
Contact Optiscan today.

More information

For more information, including Example Images, Application Notes and Detailed Specifications, simply go to: www.viewnvivo.com

Contact Optiscan now.

More Information.



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Please note: Printed resolution does not equal the real image quality. See it for yourself.

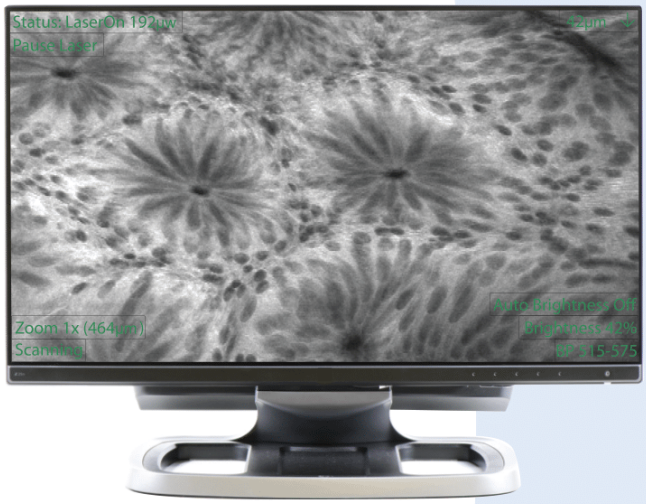
ViewnVivo
Overview

Validated Capability

View*n*Vivo is a miniaturised fluorescence endomicroscope platform that brings the next generation of Optiscan's incredible imaging capability and flexibility to Preclinical Research.

Stunning Image Quality

See real-time submicron resolution images in full-screen glory. Optiscan's patented imaging technology and variably adjustable imaging depth allows the investigation and capture of detail not possible from any other single miniaturised confocal microscope probe.



Miniaturised

Miniaturised no longer means compromise. Not only does the View*n*Vivo platform capture images comparable to those previously only possible from larger and more expensive fixed/bench mounted microscopes, it gives you the flexibility to **view cellular and sub-cellular structures in vivo** that can quickly take your research to another level.

Real-time In Vivo Insight

As someone who values the benefit of detailed insight you will appreciate the ability to unlock the ultimate and most direct observations of systems biology in vivo. No longer do you need to try to observe living tissue in an unnatural manner. With View*n*Vivo not only can you see it in its natural state but you can enable longitudinal studies and keyhole procedures whilst reducing terminal procedures.

Flexibility

Don't let inflexible bench mounted microscopy be a limiting factor. The flexibility of a hand-held miniaturised probe enables investigation not possible through fixed benchtop microscopes. View*n*Vivo lets you take the miniaturised probe to your animal model and position it at any angle of approach to allow you to interrogate the structures of interest, in vivo.

No Dedicated Technician or Facility Required

View*n*Vivo delivers maximum flexibility in a platform so simple and small that it doesn't require a dedicated technician or facility, meaning it can be used by virtually anyone and still capture unbelievable images that will validate your investigations.

It is all about the Captured Image

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