ViewnVivo

See Life Connected

Handheld, miniaturized, non-destructive, slide-free, confocal endomicroscopy for live preclinical and translational imaging at the single cell level

Optiscan

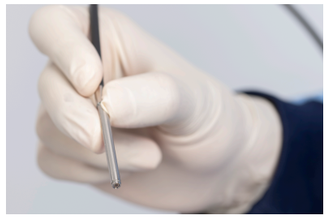
Features

ViewnVivo® by Optiscan is the most advanced miniaturised confocal endomicroscope in the world.

ViewnVivo® allows you to push the boundaries of your research with maximum flexibility, viewing live tissue at any angle with sub-micron resolution.

Miniaturised Hand-held Flexible Probes

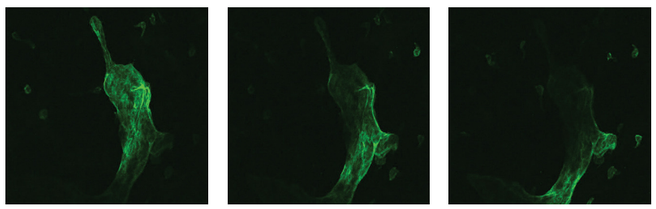
Ability to image difficult to access tissue from any angle.



The unique flexible, hand-held ViewnVivo® probe allows stable cellular imaging upon contact of tissue.

Optical Sectioning

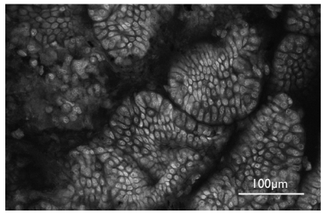
Thin optical sections enable 3D reconstruction of tissue structure in remarkable detail.



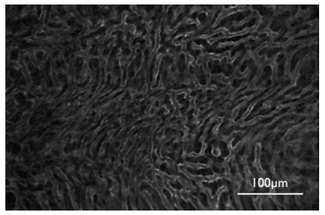
Optical sectioning of lymphatic vessel captured with ViewnVivo®. Tissue was labeled in vivo with endothelial hyaluronan receptor 1 (Alexa Fluor 488 conjugate).

Live Pre-clinical and Translational Imaging

4mm diameter probes are designed for non invasive procedures.



Mouse intestine stained with Acriflavine

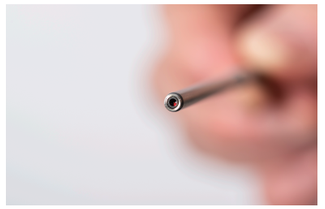


Mouse liver blood vessels stained with Tomato Lectin.

Probe Choices

Various form factors to suit different research needs.

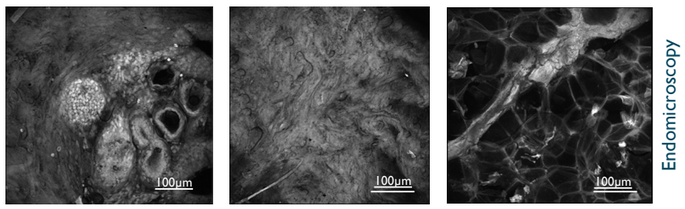
Different size form factors to suit different research needs.



Ability to continuously image from any angle.

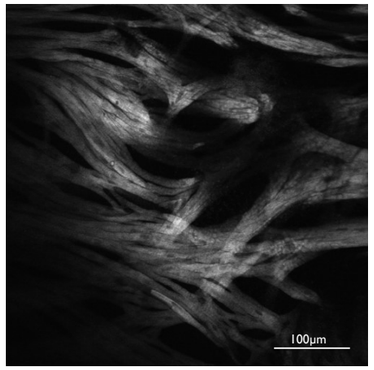
Virtual Histology

ViewnVivo® provides a cutting-edge tool for en-face real-time histological data acquisition.

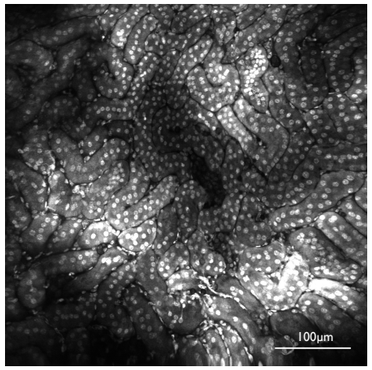


Breast Cancer | Fibrous Tissue | Normal Breast

Applications

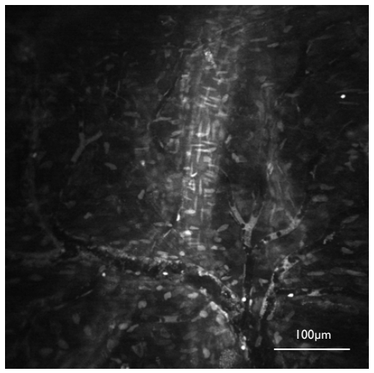


Transgenic mouse expressing YFP in the cytoplasm of cardiac myocytes of the heart atrium.

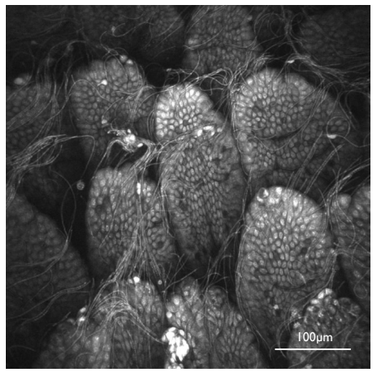


Mouse kidney stained with Acriflavine.

ViewnVivo enables investigation of living systems in stunning morphological detail.

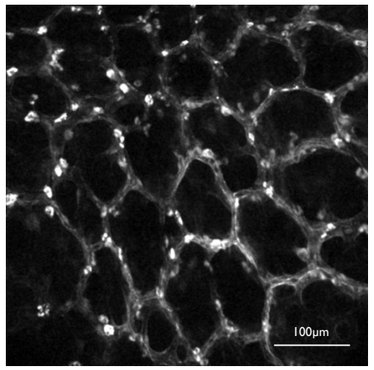


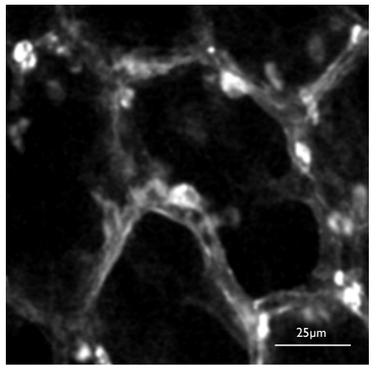
Mouse blood vessels stained with i.v FITC dextran (plasma stain) and acriflavine to label smooth muscle cells in arteriole walls which revealed a blood clot.



In vivo image of mouse ileum microbiome.

An advanced tool for longitudinal studies of physiological and pathological processes and cellular, subcellular, and molecular events to answer questions that cannot be visualized by other instruments.





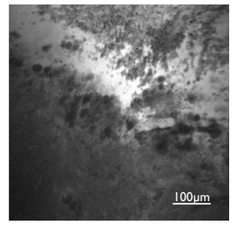
Triple labeling of Rat lung. Lung endothelial cell nuceli: acridine orange, 0.05% i.v.
Plasma: FITC-Dextran 70kDa, i.v.
Distal epithelial membranes: FITC-R.Communis lectin

The functional and molecular targeted imaging capability of ViewnVivo® enables the capture of specific cellular events impossible to recreate in-vitro.

Testimonials

“I had the opportunity over many years to see technologies that come through the laboratory and I would have to say that this probably is the most exciting technology that I have seen in my career come through the laboratory.”

Prof. Mark C Preul, MD
Director of Neurosurgery Research
Barrow Neurological Institute,
Phoenix, Arizona, USA.



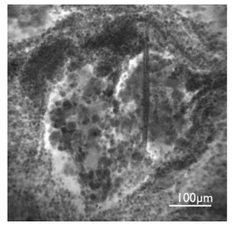
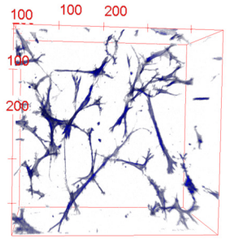
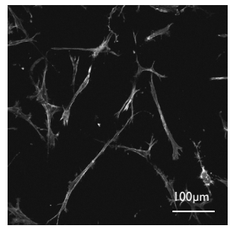


Image of Glioblastoma stained with fluorescein sodium. The left image shows the margin between tumour and normal brain tissue, while the right image shows the main glioblastoma tumour.

“We have enjoyed using the ViewnVivo system in our labs to study our cells in 3D culture in real time. The system allows us to interrogate the cells and investigate their distribution, proliferation and growth within the collagen matrix at any time tin the culture process without removing them from the sterile environment. Using a range of stains we have been able perform quality control on systems that until now, we were not able to monitor without stopping the experiment and sacrificing samples. The system is well adapted to being integrated into our PC2 hood environment to fit within our standard laboratory process flow.”

Dr Sally McArthur
Director, Manufacturing Futures Research Institute
Swinburne University of Technology,
Melbourne, Australia.

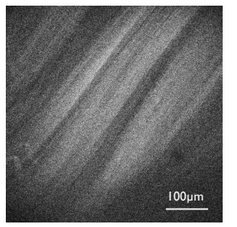


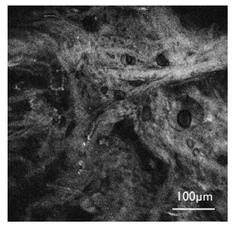


Human Dermal Fibroblasts in collagen gel stained with Alexa 488 Phalloidin (F-actin stain for cell cytoskeleton).

“The ViewnVivo confocal laser endomicroscope delivers crisp images of ligament and tendon fiber structure simultaneous with fluorescence imaging in a robust and easy to use package. Do you want the ability to collect “big microscope” data where only a millimetre-scale object can fit? Optiscan’s CLE is a powerful tool for tissue research and medical diagnosis.”

Prof. Mark M. Banaszak Holl
Professor and Head
Department of Chemical Engineering
Monash University, Melbourne, Australia.





Autofluorescence imaging (left) and confocal endomicroscopy (right) of the anterior cruciate ligament in a study examining examining failure from fatigue related microdamage.

ViewnVivo
by Optiscan

Technical Specifications

Laser power	10-1000µW
Laser	488nm
Resolution	0.55µm lateral; 5.1µm axial
Field of View	475µm x 475µm
Image Capture Modes	Single frame Continuous capture Z-stack Roll-back (60 frames)
Z-depth	0 – 400µm with dynamic depth change capability
Probes	44mm X 4.0mm Ø 66mm X 4.0mm Ø 300mm X 4.0mm Ø
Filters	8 Standard filters 4 custom filter position
Frame rate	Up to 3.5fps

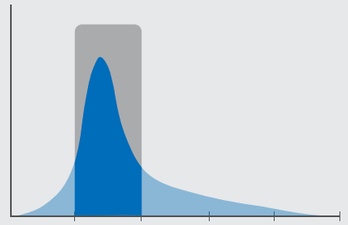
Footswitch Control

1. Home Position and Standby Mode
2. Z Depth and Direction Controls
3. Image Capture Controls

Precision Micro Positioner

Small probes can be secured in the high precision 3 axis micro positioner mounted to an articulated holding arm for maximum flexibility and accuracy of imaging.

Detection Filters



Band Pass 515-550
Band Pass 515-575
Band Pass 515-575
Band Pass 515-540

Long Pass 515
Long Pass 540
Long Pass 570

Software Use

Laser Control
Start, pause or adjust the output of the laser

Zoom Control
Provides the ability to change zoom

Scanning Controls
Start or pause scanning

Z Depth Control
Adjustable to navigate through the tissue

Control Panel
Virtual lexan for advanced imaging functions including continuous capture

Brightness Controls
Adjust or activate auto brightness

Filter Selection
Choose from a selection of filters installed

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ViewnVivo by Optiscan

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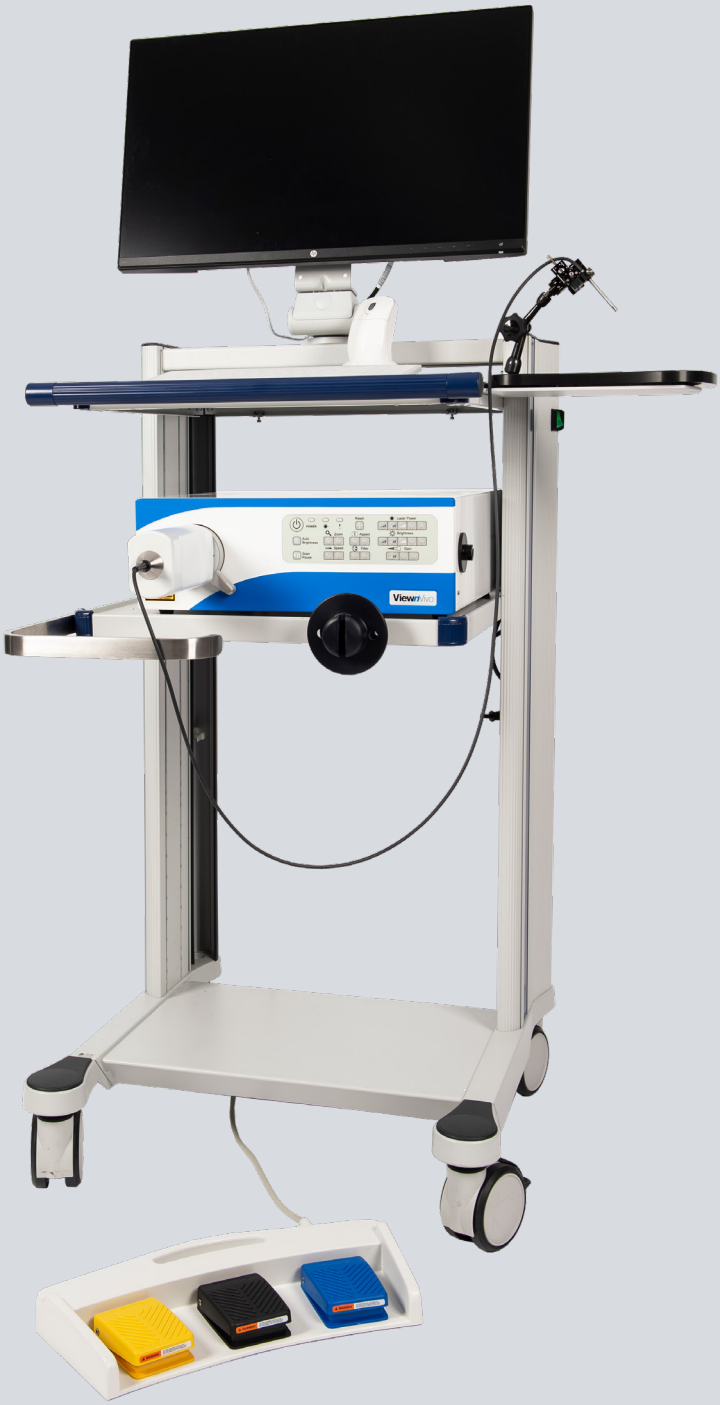
Optiscan Imaging Limited specialises in Fluorescence In Vivo Endomicroscopy and is the only manufacturer of confocal endomicroscopes with dynamic z-scanning capability.

The flexible hand-held ViewnVivo® probe allows you to push the boundaries of your research with maximum flexibility, as images can be captured at any angle with sub-micron resolution and dynamic optical sectioning.



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Immediate Informed Decisions