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# ABOUT US

## Making your research simpler and more productive

At Scintica, we advance science and medicine by supplying researchers with reliable preclinical research instrumentation. Our carefully selected portfolio of imaging systems, research tools, and supporting technologies is designed to reduce complexity and help scientists focus on what matters most, generating meaningful results.

We partner closely with the preclinical research community to connect teams with solutions that are scientifically robust and built to support research challenges. From system selection through long-term support, our goal is to make research more productive, efficient, and impactful.


### Our Mission

Our mission is to advance science and medicine by providing best-in-class preclinical research instrumentation, expertise, and support. We work collectively with researchers to identify the right solutions for them, helping them push boundaries, accelerate discovery, and drive progress in their fields.


### We are Scientists

Our team brings hands-on scientific and technical expertise to every partnership, working alongside researchers to understand their goals and guide them to the most effective solutions. We don't just supply instruments, we support the research behind them. Scientists Supporting Scientists.


### Our Goals



We are committed to delivering cutting-edge instrumentation, tools, and research solutions to the preclinical research and translational medicine communities.



Building connections within the research community is a top priority for us. As such, one of our core values is keeping scientists informed about the latest ground breaking technologies in their field.



Providing exceptional support to our customers and assisting them in finding the best research solutions is one of our primary goals. We strive to consistently deliver outstanding customer service.

# OUR PARTNERS



# HIGH-FREQUENCY ULTRASOUND

## PROSPECT T2



The **Prospect T2** is an innovative high-frequency ultrasound system designed for *in vivo* preclinical imaging in small animals such as mice, rats and zebrafish. This compact and cost-effective tablet-based system provides high-resolution images (up to 30  $\mu\text{m}$ ) and advanced capabilities to monitor changes in hemodynamics and observe anatomical structures in real-time.

There are three available probes with frequencies ranging from 15-50 MHz. The system comes with all standard imaging modes including B-mode, M-Mode, Power/Color/PW/Tissue Doppler, and Contrast (linear and non-linear/harmonic) imaging mode.

### Probes

**20 MHz**  
15-25 MHz

**40 MHz**  
33-50 MHz

**50 MHz**  
33-50 MHz



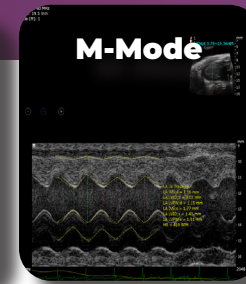
### Applications

<b>Cardiovascular Research</b>	Real-time cardiac and vascular imaging enables heart function and blood flow assessment from in utero to adulthood.
<b>Cancer Research</b>	Used in various oncology models, it enables non-invasive detection and tracking of tumor growth, assessment of blood flow and molecular changes, and facilitates image-guided procedures.
<b>Abdominal &amp; Anatomical Imaging</b>	Offers non-invasive 2D and 3D imaging of abdominal organs, urogenital and musculoskeletal areas, blood vessels, as well as perfusion assessments.
<b>Developmental Biology</b>	Non-invasively enables pregnancy confirmation, embryonic development monitoring, cardiac assessment, and image-guided interventions.
<b>Ophthalmology</b>	Versatile for visualizing eye structures across various species, supporting 3D imaging, Doppler blood flow assessment, microbubble perfusion evaluation, and image-guided injections.
<b>Other Species</b>	Versatile and compatible with a wide range of species, including zebrafish, chick embryos, amphibians, bats, hamsters, and more.

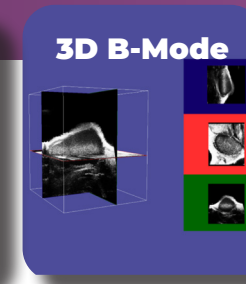
### Imaging Modes



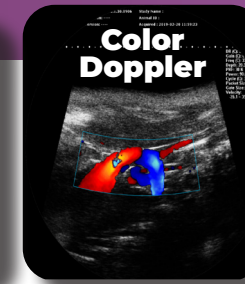
Mouse Left Ventricle in Long Axis



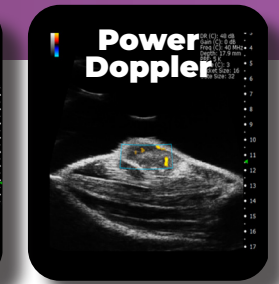
Mouse Left Ventricle in Short Axis



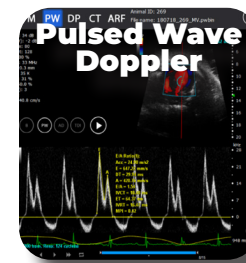
Mouse Mammary Fat Pad Tumor 3D



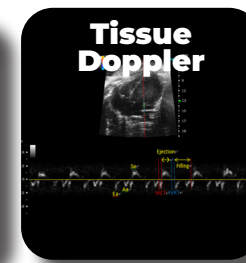
Mouse Aortic Arch



Mouse Subcutaneous Tumor



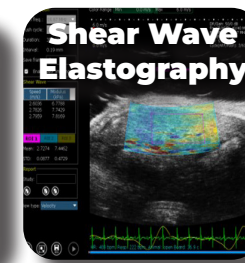
Mouse Mitral Valve Inflow



Mouse Mitral Valve Annulus



Mouse Subcutaneous Tumor



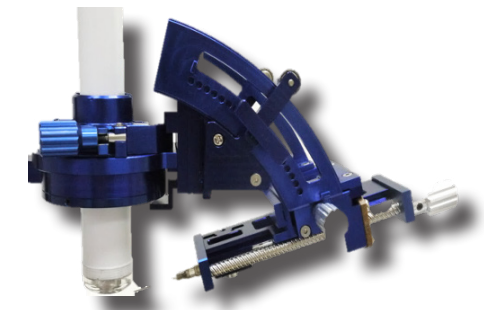
Shear Wave Through Mouse Liver



ECG Gated Kilohertz Visualization

### Features & Specifications

<b>Hardware Add-ons:</b>	<ul style="list-style-type: none"> <li>3D Motor with 5 <math>\mu\text{m}</math> step-size</li> <li>Coplanar injection mount for image guided injection</li> <li>Acoustic radiation force push probe</li> </ul>
<b>Animal Handling Platform:</b>	<ul style="list-style-type: none"> <li>Mouse Platform: 17.2 x 14.2 cm (L x W)</li> <li>Rat Platform: 28.3 x 18.2 cm (L x W)</li> <li>Heated</li> <li>Integration for anesthesia nose cone</li> <li>Temperature Monitoring</li> <li>Respiratory rate, ECG, and heart rate with triggering</li> </ul>
<b>Resolution:</b>	<ul style="list-style-type: none"> <li>Up to 30 <math>\mu\text{m}</math></li> </ul>
<b>Field-of-View: (FOV)</b>	<ul style="list-style-type: none"> <li>Depth up to 39 mm x Width 23 mm</li> </ul>
<b>Frame Rate:</b>	<ul style="list-style-type: none"> <li>Up to 400 fps (EKV Mode)</li> </ul>
<b>System Dimensions:</b>	<ul style="list-style-type: none"> <li>360 x 280 x 65 mm</li> </ul>
<b>Data Format:</b>	<ul style="list-style-type: none"> <li>Still and movie export: jpg, bmp, tif, DICOM, avi</li> <li>RAW RF data, with MATLAB import scripts</li> <li>Proprietary format for save3d CineLoop data</li> </ul>



- Compact with Small Footprint
- Tablet Design
- Touch Screen
- Intuitive Workflow

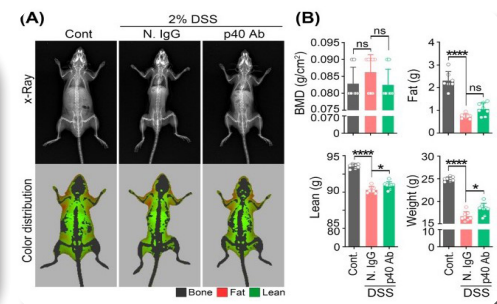
# DEXA (DXA) iNSiGHT



The **iNSiGHT DEXA** system is a state-of-the-art *in vivo* Dual Energy X-Ray Absorptiometry (DXA/DEXA) system designed for preclinical research. The system offers a wide range of measurements, which include bone mineral density, bone mineral content, bone area, tissue area, percentage of fat tissue, weight, percentage of lean tissue, and total weight in grams.

This system is equipped with a fully shielded X-ray cabinet and is optimized for studying small animals such as mice, rats and other small animals up to 500g. It provides fast and efficient body composition measurements with a scan time of 25 seconds. Designed to deliver a low dose of radiation, this system can be used for longitudinal studies.

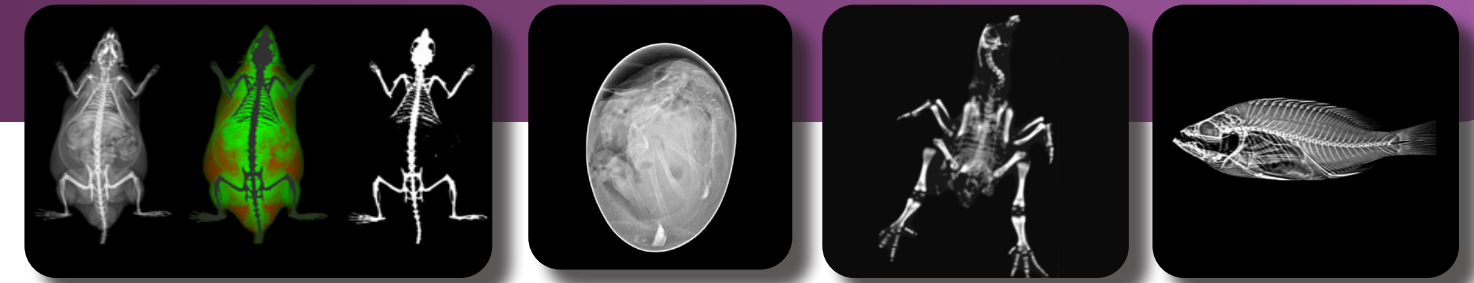
- Scan time of 25 sec
- Low Radiation
- User Friendly
- Large Scan Area (16.5 x 25.5 cm)



\* Representative DEXA images captured on the iNSiGHT system in a mouse model of colitis

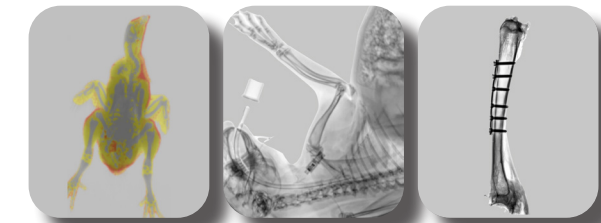
## Applications

<b>Metabolic Disorders</b>	Enables precise, non-invasive tracking of body composition changes over time, offering critical insights into disease progression and therapeutic efficacy.
<b>Drug Safety &amp; Toxicology</b>	Evaluates the impact of target compounds by tracking changes in fat mass, lean mass, and bone mineral density, supporting dose optimization and safety assessments.
<b>Musculoskeletal Diseases</b>	The system measures changes in bone mineral density and body composition to monitor disease progression or regression and evaluate therapeutic interventions.
<b>Metabolic Bone Disease &amp; Arthritis</b>	By detecting bone abnormalities, the iNSiGHT system aids in understanding disease progression, treatment response, and underlying mechanisms in metabolic bone diseases and arthritis.
<b>Hypoxia</b>	Provides detailed body composition analysis during hypoxic exposure, with color imaging to differentiate fat from lean tissue. Relevant for studies in altitude medicine, metabolic health, and cardiovascular research.

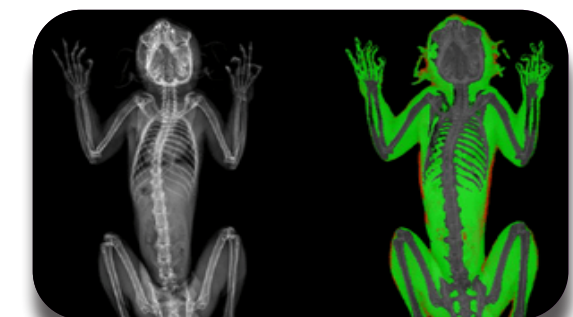


## Features & Specifications

<b>Scan Time:</b>	• 25 seconds = high-throughput
<b>Easy Data Acquisition:</b>	• No preparation steps other than Anesthesia needed
<b>Low Dose Radiation:</b>	• Minimal ionizing radiation (0.66 mGy) = longitudinal studies
<b>Scan Area:</b>	• 16.5 x 25.5 cm • Samples to be imaged from 10 g to 500 g
<b>Scan Method:</b>	• Cone beam
<b>Pixel Size:</b>	• 100 µm at 1.2X, magnification (DXA Mode) 31 µm at 4X magnification (DR mode)
<b>Images:</b>	• X-Ray attenuated image • Bone mineral density map • Color map
<b>Calculation Parameters:</b>	From whole animal, sample, or by user-defined regions of interest (ROI). • Bone Mineral Content (BMC) • Bone Mineral Density (BMD) • Bone area • Tissue area • Fat tissue (mass and percentage) • Lean tissue (mass and percentage) • Total mass
<b>Dimensions:</b>	• 66 x 61 x 113 cm (W x D x H)
<b>Power:</b>	• 110/240 VAC, 50/60 Hz, 200 VA



- Small Footprint
- Low Dose Radiation
- 25 Second Fast Scan Time



\* References: Jung, Y. K., Lee, S., Yoo, J. I., & Baek, K. W. (2023). The protective effect of IL-12/23 neutralizing antibody in sarcopenia associated with dextran sulfate sodium-induced experimental colitis. *Journal of Cachexia, Sarcopenia and Muscle*.

# BODY COMPOSITION

## Niumag QMR06



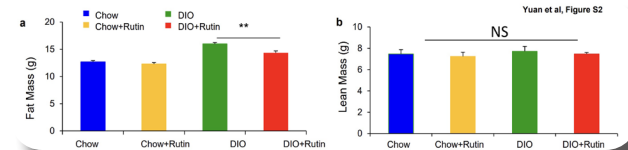
The **Niumag QMR06** is a quantitative small animal *in vivo* body composition analyzer designed specifically for mice, rats, and *ex vivo* samples.

With no preparation or anesthetic needed, the QMR06 delivers quantitative analysis of lean mass, fat mass, and water content.

The QMR06 quantifies these parameters based on the differences in relaxation times between lean, fat, and water.

The QMR06 provides the following measurements\*:

- **Lean mass (g)**
- **Fat mass (g)**
- **Water content (g)**



## Features & Specifications

### Zero Preparation Required

No-hassle method for quantifying body composition with no prior preparation needed, such as anesthesia.

### Awake Animal Measurements

Without need for anesthetic, measure lean mass, fat mass, and water content in awake animals.

### Permanent Magnet Technology

With permanent magnet technology, operation and maintenance is simplified with the QMR06.

### Non-invasive

With a non-invasive approach for body composition measurements, the QMR06 is ideal for longitudinal studies.

### Optional Imaging Mode

The QMR06 has an optional mode to acquire 2D images of the spatial distribution of fat mass.

## Applications

- Metabolic Disorders
- Nutrition
- Drug/Therapeutic Development
- Oncology
- Aging

System Models & Specifications	
	<b>QMR06-090H-PRO</b>
<b>Magnet Type:</b>	Permanent magnet (0.15 ± 0.015 T)
<b>Animal Size:</b>	10 – 800 g Mouse/Rat 0.6 – 6 g Tissue
<b>Scan Time:</b>	> 3 minutes
<b>Probe Diameter:</b>	Package includes 15 mm, 60 mm, and 90 mm probes
<b>Operating System:</b>	Windows 11

\* References: Yuan, X., Wei, G., You, Y., Huang, Y., Lee, H. J., Dong, M., Lin, J., Hu, T., Zhang, H., Zhang, C., Zhou, H., Ye, R., Qi, X., Zhai, B., Huang, W., Liu, S., Xie, W., Liu, Q., Liu, X., ... Jin, W. (2017). Rutin ameliorates obesity through brown fat activation. *FASEB Journal*, 31(1), 333–345. <https://doi.org/10.1096/fj.201600459RR>

# PHOTOACOUSTIC TOMOGRAPHY

## TRITOM



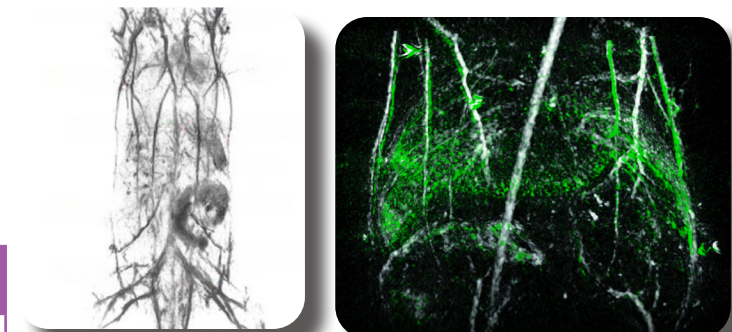
The **TriTom** imaging platform utilizes photoacoustic and fluorescence tomographies (PAFT) to enable high-resolution (up to 160  $\mu\text{m}$ ) non-invasive *in vivo* whole-body imaging of small animals.

With the ability to use multiple excitation wavelengths per scan, the multi-modality system can simultaneously acquire photoacoustic and fluorescence data in large volumes (> 25  $\text{cm}^3$ ) allowing for spectroscopic molecular analysis within the region of interest.

In addition to 3D molecular maps, the TriTom enables spatially-resolved assessment of physiologic parameters *in vivo*, such as volumetric blood content and oxygenation without the need for contrast agents. The TriTom provides quantitative imaging for a wide range of fluorophores and other molecular probes excited between 460 nm and 1320 nm.

## Applications

- Oncology Research
- Tissue Engineering and Regeneration
- Developmental Biology
- Neuroscience
- Development of Molecular Probes, Optical Contrast Agents, and Fluorophores



PhotoAcoustic (PA) Imaging Channel		
<b>Model:</b>	<b>Basic</b>	<b>Premium</b>
<b>Type:</b>	3D (High-resolution deep tissue molecular, physiological, and anatomical imaging, subcutaneous & skin imaging)	
<b>Spatial Resolution:</b>	160 $\mu\text{m}$ x 160 $\mu\text{m}$ - Transverse anatomical planes 160 $\mu\text{m}$ x 470 $\mu\text{m}$ - Sagittal and coronal anatomical planes	
<b>Molecular Imaging Sensitivity:</b>	100 nM ICG in blood plasma Multi-species molecular unmixing CNR 1.7	
<b>PA Excitation Range:</b>	532 nm & 650 - 1320 nm	460 - 1320 nm
<b>Laser Pulse Repetition Frequency:</b>	20 Hz	
<b>Peak Pulse Energy:</b>	160 mJ @ 700 nm	130 mJ @ 700 nm
<b>Detection Points Per Scan:</b>	> 69,000 (Single scan, 360 deg azimuthal rotation)	
<b>Detector Configuration:</b>	Curve-linear array Scanned 360 deg	
<b>Detector Characteristics:</b>	96 Elements 6 MHz $\pm$ 10% $\geq$ 55% bandwidth @ -6 dB	
<b>PA Signal Digitizer:</b>	12-bit dynamic range 40 MHz sampling rate Programmable amplifier from 46-91 dB	

Fluorescence (FL) Imaging Channel	
<b>Model:</b>	<b>Premium</b>
<b>Type:</b>	3D or Real-time 2D
<b>Spatial Resolution:</b>	170 $\mu\text{m}$ x 125 $\mu\text{m}$ (At the skin level of a live test subject)
<b>FL Excitation Range:</b>	460 - 800 nm
<b>Excitation Line Width:</b>	< 1 nm (equivalent to employing 150 extremely narrow band excitation filters)
<b>Emission Filter Set:</b>	<ul style="list-style-type: none"> <li>• 8 filters covering emission range between 510 nm and 995 nm</li> <li>• 2 additional filter slots available</li> </ul>
<b>Detector Type:</b>	Back-illuminated sCMOS
<b>Bit Depth:</b>	16-bit
<b>Max Frame Rate:</b>	40 fps

# MRI

## M-SERIES COMPACT MRI



The **M-Series™ Compact MRI Systems** deliver high-performance magnetic resonance imaging in a cryogen-free, self-shielded, and low-maintenance platform built around advanced permanent-magnet technology. Designed for preclinical researchers at any level of experience, the M-Series makes MRI — the gold standard for soft-tissue imaging — accessible to everyone without the cost, complexity, or infrastructure demands of traditional superconducting systems. Compact, intuitive, and versatile, the M-Series support a broad range of *in vivo* and *ex vivo* studies, enabling high-resolution visualisation and quantification of anatomy, physiology, and pathology across multiple research areas.

- Permanent Magnet
- Self-shielded
- User Friendly
- Affordable



### Applications

#### Anatomy & Morphology

High-contrast T1/T2 imaging for assessing anatomy, inflammation, metabolic disorders, and organ pathology (e.g., liver, kidney). Perfusion and contrast imaging reveal subtle structural and functional changes.

#### Neurobiology

Enables imaging of neuroinflammation, stroke, epilepsy, neurodegeneration, tumours, traumatic brain injury. Contrast-enhanced angiography and molecular imaging support studies of brain function, perfusion, connectivity and neural pathway activation.

#### Cancer/Oncology

Ready-to-use T1/T2 protocols for tumour detection, phenotyping, longitudinal monitoring of tumour growth and therapeutic response assessment. Functional and molecular imaging assess vascular dynamics and hypoxia, necrosis.

#### Cardiovascular Biology

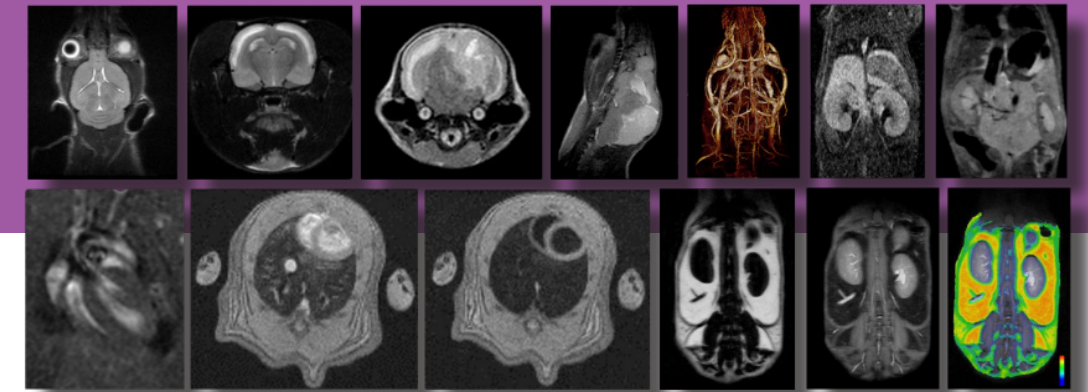
Quantify cardiac volume, ejection fraction, wall motion, strain, torsion and perfusion, and image challenging area like atria. Simplified workflows support reproducible longitudinal studies.

#### Body Composition Analysis

Quantify fat and lean tissue distribution for evaluating obesity, metabolic disorders, sarcopenia, and therapy-induced changes in body composition.

#### Ex Vivo Imaging

Fast, high-resolution imaging of fixed embryo or tissues to detect lesions, guide histopathology, and quantify regions of interest for precise correlation with histological data.



#### Functional & Molecular Imaging with Contrast Agents

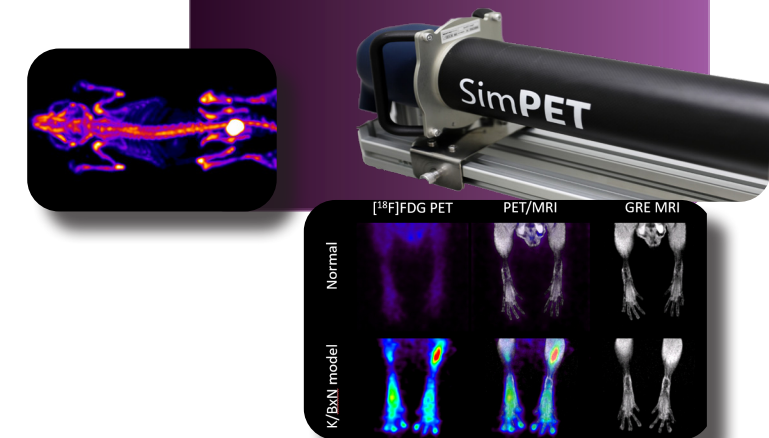
Contrast agents (e.g., gadolinium, manganese, and iron-oxide nanoparticles) expand imaging capabilities to include dynamic contrast-enhanced (DCE) MRI, cardiac imaging (infarct size, viability), and neural pathway activation.

#### M7 SimPET — True Simultaneous PET/MRI

The M7 SimPET combines all the advantages of the M7 with the state-of-the-art SimPET insert from Brightonix Imaging, delivering simultaneous PET/MRI for fully co-registered structural, functional, and molecular imaging in a single acquisition.

- M3**  
Mice Only
- M5**  
Mice, Rats & Other Small Animals
- M7**  
Mice, Rats & Other Small Animals
- M12**  
Non-human Primates

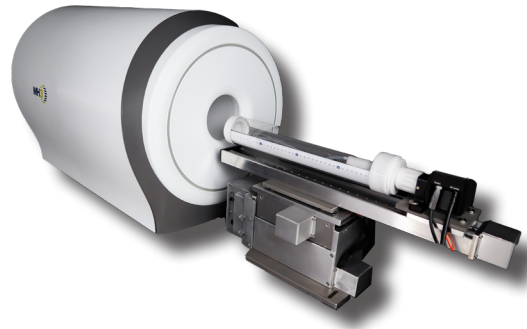
#### M7 Compatible with Brightonix SimPET



Specifications Front End (Magnet)	M3	M5	M7	M12
<b>Dimensions:</b>	1080 x 734 x 734 mm 42.5 x 29 x 29 inches	1133 X 800 x 800 mm 44.6 x 31.5 x 31.5 inches	1320 x 790 x 950 mm 52 x 31 x 37.5 inches	1810 x 1450 x 1710 mm 71.26 x 57.09 x 67.32 inches
<b>Weight:</b>	650 kg / 1,430 lbs	950 kg / 2,095 lbs	1,550 kg / 3,415 lbs	5,500 kg / 12,125 lbs
<b>Magnet Opening Flange Insertion Diameter Inner Bore (H x W):</b>	70 mm / 2.8 inches 50 x 130 mm / 2 x 5.1 inches	No insertion flange in M5 (Bore is open) 76 x 200 mm / 3 x 7.9 inches	97 mm / 3.8 inches 220 x 90 mm / 8.6 x 3.5 inches	184 x 260 mm / 7.2 x 10.2 inches
<b>Imaging Volume:</b>	80 x 80 x 35 mm <sup>3</sup> spheroid	90 x 90 x 60 mm <sup>3</sup> spheroid	120 x 120 x 70 mm <sup>3</sup> spheroid	120 x 130 x 130 mm <sup>3</sup> ellipsoid
<b>B<sub>0</sub>(Tesla):</b>	1T	1T	1T	1T

# SPECT

## MH3D Alpha-SPECT Mini



The **Alpha-SPECT Mini**® is a high-performance SPECT imaging system for preclinical research that features high performance CZT sensors. Unparalleled energy resolution makes it perfect for multi-isotope imaging.

The system offers ultra-wide stationary field-of-view needed for comprehensive whole-body dynamic studies of small animals. Scanning up to 4 mice simultaneously with integrated physiological monitoring, heated animal bed with and anesthesia delivery.

The system has fully optimized multi-isotope imaging capabilities for studying alpha-labeled radiopharmaceuticals (alpha-RPT) and a machine learning algorithm for detector performance enhancement.

### Applications

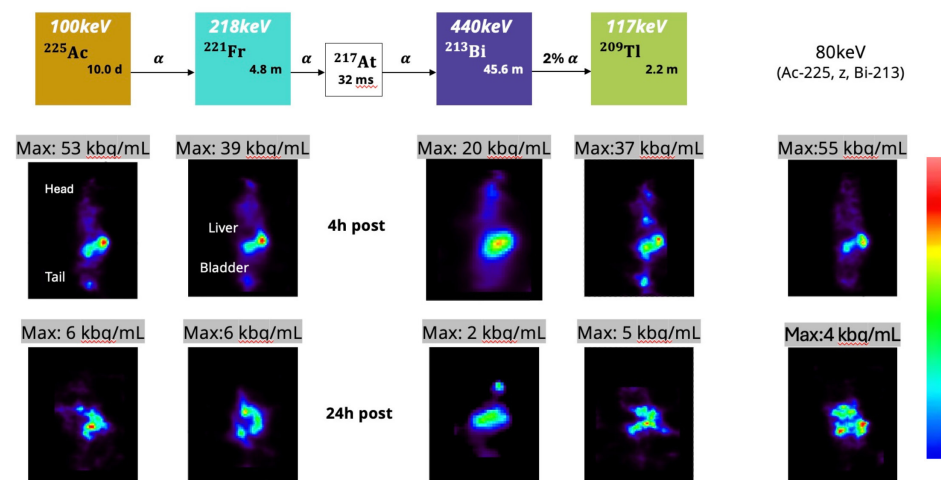
- Theranostics
- Spectral Imaging
- Oncology
- Cardiology
- Drug Development
- Dynamic Development
- Metabolic & Bond Diseases

### Specifications

Configuration:	Standard Mode (A)	High-Resolution Mode (A)	High-Resolution Mode (B)
<b>Field-of-View (W x L):</b>	60 mm x 80 mm	40 mm x 60 mm	30 mm x 60 mm
<b>Spatial Resolution at 140 keV:</b>	<2.5 mm	<1.5 mm	<1 mm
<b>Sensitivity:</b>	4200 cps/MBq	600 cps/MBq	Customizable
<b>Energy Resolution at 140 keV:</b>	3-4 keV		
<b>Detector:</b>	CZT		
<b>Bore Size:</b>	12 cm		Customizable
<b>Reconstruction Algorithm:</b>	MELM		

### Targeted Alpha Therapy: Ac-225 @ 80, 100, 117, 218, and 440 keV

Dose: 2µCi, Image time: 60 minutes 4h/24h p.i., Model: Mouse



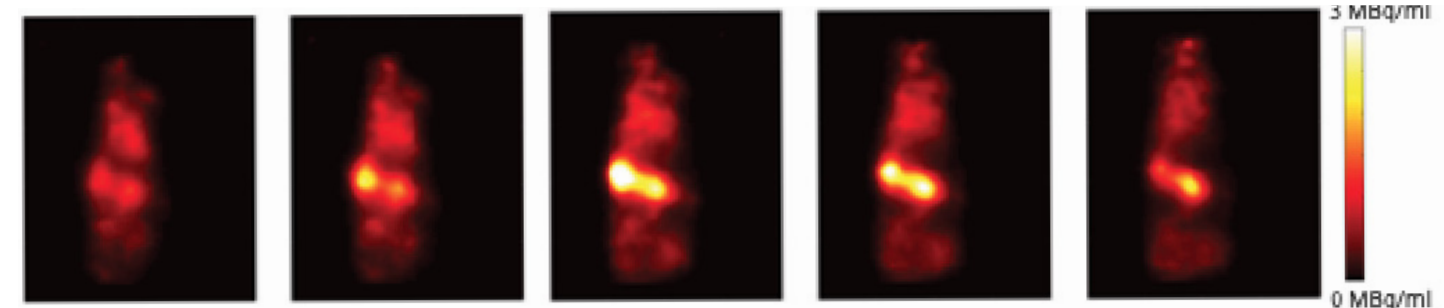
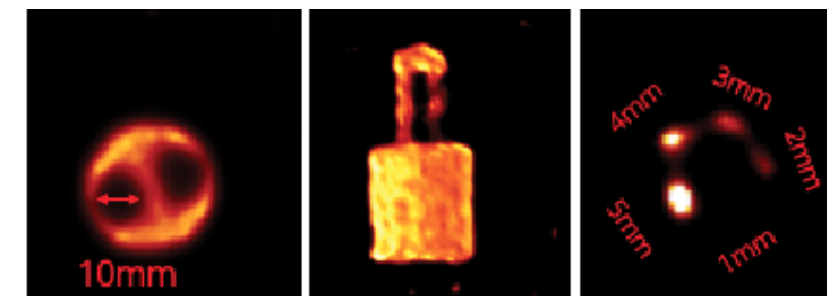
Can Yang, et al, IEEE MIC 2024

### Features

<b>Image Theranostic Isotopes:</b>	• Imaging of theranostic isotopes: E.g. <sup>225</sup> Ac, <sup>177</sup> Lu, <sup>223</sup> Ra (including all SPECT isotopes between 30keV-500keV)
<b>Image &amp; Quantify <sup>225</sup>Ac and Daughter Nuclides:</b>	• Image & quantify <sup>225</sup> Ac and daughter nuclides ( <sup>221</sup> Fr, <sup>213</sup> Bi, <sup>209</sup> Tl) simultaneously or individually from a single scan
<b>Multi-isotope Imaging:</b>	• Ideal for multi-isotope imaging, with unmatched energy resolution and advanced list-mode data acquisition
<b>CZT Dectectors:</b>	• New CZT detectors are paired with two interchangeable pinhole collimators to enhance the performance of high-resolution detectors, achieving unparalleled energy resolution for isotopes that were previously difficult to image
<b>Dynamic Imaging:</b>	• Dynamic imaging capabilities for imaging studies down to time intervals of seconds
<b>Biodistribution Studies:</b>	• Ideally suited for biodistribution studies and is fully optimized for imaging with all SPECT isotopes. Its stationary detector design, combined with a dual-field-of-view micro-scanning aperture, enhances imaging resolution and provides ultra-high sensitivity for a wide range of imaging applications

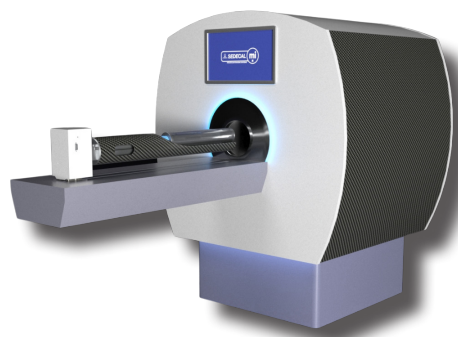
Lu-177 IQ Phantom

Activity: 48.8µ Ci Imaging Time: 2h



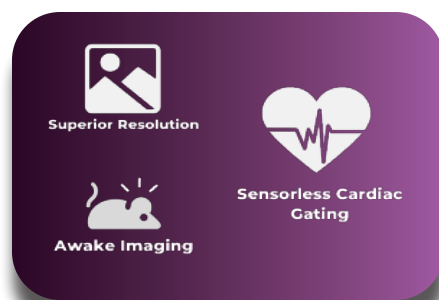
# PET/CT

## BIOPet/CT



The **BIOPet/CT** is a next generation PET/CT system, implementing the latest in *Depth-of-Interaction* (tDOI) technology for uncompromised resolution across its entire Field of View. Fully configurable for a large range of animal sizes, it uses a Triple Virtual Layer of LYSO Crystals that provide excellent stopping power and permit REAL-TIME PET imaging, the only PET system on the market to do so.

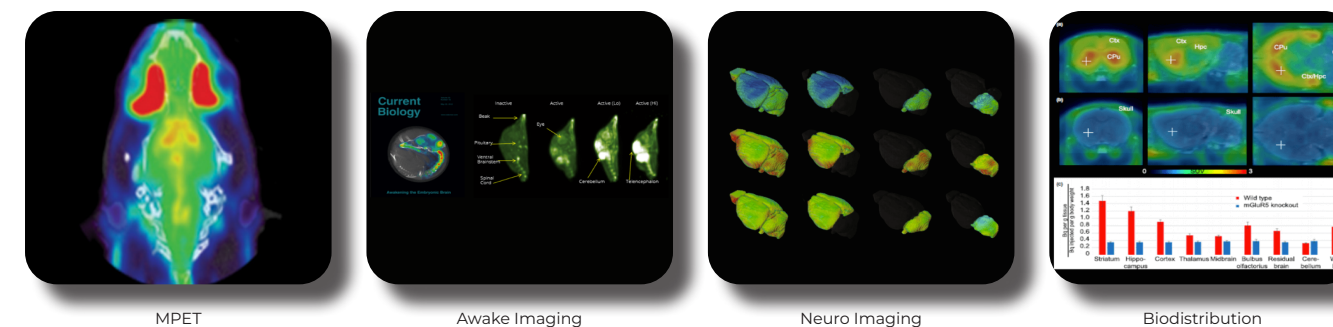
The system offers a truly integrated workflow with fast scan times at superior resolution, improved localization, and quantifiable data with the automatic fusion of PET and CT information.



- Real-time Imaging
- Sensorless Cardiac Gating
- Conscious/Awake Imaging
- Multi-animal Imaging
- Multiplexed Imaging (mPET)

### Applications

<b>Oncology</b> <ul style="list-style-type: none"> <li>• Cell proliferation</li> <li>• Apoptosis</li> <li>• Angiogenesis</li> <li>• Metastasis</li> <li>• Gene expression</li> <li>• Receptor-ligand interaction</li> </ul>	<b>Cardiology</b> <ul style="list-style-type: none"> <li>• Myocardial perfusion</li> <li>• Myocardial metabolism</li> <li>• Infarct</li> <li>• Coronary artery disease</li> <li>• Inflammation and plaque development</li> </ul>
<b>Neurology</b> <ul style="list-style-type: none"> <li>• Cerebral blood flow</li> <li>• Cerebral metabolic rate</li> <li>• Neurological receptors</li> <li>• Plasma membrane transporters</li> <li>• Receptor binding sites</li> </ul>	<b>Dynamic Imaging 4D/3D</b> <ul style="list-style-type: none"> <li>• Time Activity Curves</li> <li>• Radiotracer accumulation</li> <li>• Biodistribution kinetics</li> </ul>
<b>Metabolic and Bone Diseases</b> <ul style="list-style-type: none"> <li>• Rickets</li> <li>• Rheumatoid arthritis</li> <li>• Metabolic disorders</li> <li>• Osteoporosis</li> <li>• Osteomalacia</li> </ul>	<b>Drug Development</b> <ul style="list-style-type: none"> <li>• Target concentrations</li> <li>• Kinetics</li> <li>• Biodistribution</li> </ul> <b>Theranostics</b> <ul style="list-style-type: none"> <li>• Multiplexed PET (mPET)</li> </ul>



### Features & Specifications

<b>Resolution:</b>	• Superior resolution - $\leq 1.0$ mm
<b>Detector:</b>	• Triple Virtual Layer of LYSO Crystals with Parallax correction
<b>Sensitivity:</b>	• 4 – 16 % Sensitivity (at 100 to 700 keV) (varies by model)
<b>Animal Handling:</b>	<ul style="list-style-type: none"> <li>• Integrated temperature control and physiological monitoring</li> <li>• Cardiac and respiratory gating</li> <li>• Anesthesia control</li> <li>• Animal transfer bed</li> </ul>
<b>CT:</b>	• Low dose radiation/fast scan times

Systems can be configured as standalone PET systems or incorporated with computed tomography (CT)

### Model | 2r | 3r | 4r | 6r | 2R | 4R | 6R | 2P | 4P | 6P

<b>Fixed axial field of view (mm):</b>	50	100	100	150	50	100	150	50	100	150
<b>Dynamic axial field of view:</b>	220	220	220	220	350	350	350	650	650	650
<b>Transaxial field of view (mm):</b>	80	85	80	80	120	120	120	210	210	210
<b>Bore Size (mm):</b>	100	100	100	100	160	160	160	260	260	260
<b>Number of PET Rings:</b> <i>(3 &amp; 5 ring options available)</i>	2	3	4	6	2	4	6	2	4	6
<b>Number of Detectors:</b>	28	42	56	84	48	96	144	64	128	192
<b>Number of DOI Crystals:</b>	7 168	10 752	14 336	21 504	12 288	24 576	36 864	16 384	32 768	49 152

# OPTICAL (BLI/FLI)

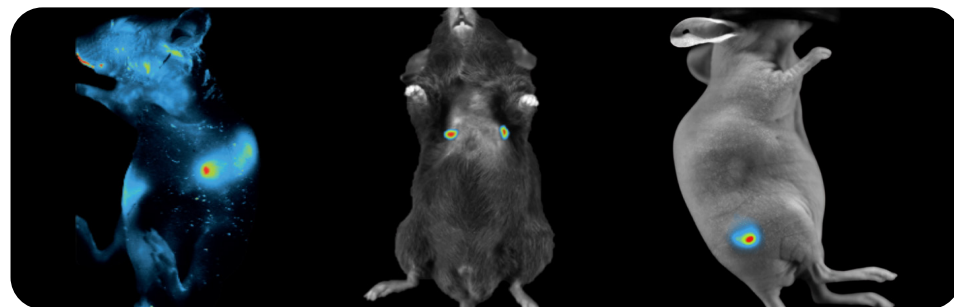
## NEWTON 7.0



The **Newton 7.0** is a cutting-edge optical imaging system that offers the versatility to perform bioluminescence, fluorescence, 3D tomography, and X-ray imaging. The Newton's advanced features, such as spectral unmixing, make it ideal for *in vivo*, *ex vivo*, and *in vitro* imaging applications, as well as for simultaneous imaging of multiple specimens.

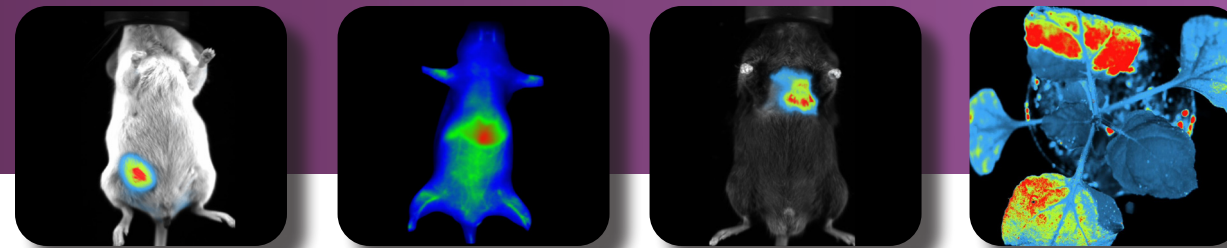
The system features a state-of-the-art camera that boasts one of the widest lens apertures on the market. This camera provides excellent sensitivity for a variety of luciferase enzymes and fluorophores commonly used in preclinical research, allowing for fast and efficient signal acquisition. The intuitive workflow and user-friendly software are optimized for multi-user environments, saving valuable time in longitudinal studies.

License-free  
Acquisition and  
Analysis Software



### Applications

<b>Oncology</b>	Evaluate the progression and spread of cancer throughout the body in preclinical animal models.
<b>Immunology</b>	Characterize diverse populations of immune cells, gaining valuable insight into their physiology and facilitating the development of new therapeutic strategies.
<b>Infectious disease</b>	Visualize a site of infection <i>in vivo</i> , as well as the efficacy of treatment.
<b>Neurology</b>	Assess the progression of various neurodegenerative diseases as well as to test novel targeted therapeutics within the brain and spinal cord.
<b>Biodistribution studies</b>	The ability to image the entire specimen (i.e., multiple organs simultaneously) provides optical imaging with a unique advantage in biodistribution studies.



### Features & Specifications

<b>Emission Filters</b>	<ul style="list-style-type: none"> <li>8 narrow bandpass emission filters (standard configuration)</li> <li>11 position filter wheel</li> </ul>
<b>Fluorescent Excitation:</b>	<ul style="list-style-type: none"> <li>8 excitation channels across the visible and near-infrared spectrums</li> <li>2 powerful Laser Class II arrays control the illumination light</li> </ul>
<b>3D Optical Topography:</b>	<ul style="list-style-type: none"> <li>3D topographic overlay of BLI signal with integrated mouse atlas</li> </ul>
<b>Motorized Darkroom:</b>	<ul style="list-style-type: none"> <li>Motorized camera (Z-axis) and animal pad (X/Y axis) with adjustable FOV</li> </ul>
<b>Acquisition and Analysis Software:</b>	<ul style="list-style-type: none"> <li>License-Free</li> <li>User Friendly</li> <li>Fully GLP and CFR21-compliant</li> <li>Data export at 16-bit .tiff or 8-bit .jpg format</li> </ul>

#### Camera

##### All Models

- Scientific 16-bit CCD Sensor
- 2160x2160 (4.6 MP)
- 8.6µm x 8.6µm pixel size
- 10 MP Image Resolution

##### All Models

**Cooling** -90°C  
**Lens** f/0.070  
**BLI** Yes

Models	BT 100	FT 100	BT 500	FT 500	Bio
<b>VIS/NIR Fluorescence</b>	Upgradeable	400 > 900 nm	Upgradeable	400 > 900 nm	400 > 900 nm
<b>Emission Filters</b>	4 Narrow Band-pass filters included for BLI Tomography: 500/550/600/650 nm		8 Narrow Band-pass filters included: 500/550/600/650/700/750/800/850 nm		
<b>X-Ray</b>	No	No	No	Upgrade Available	No
<b>Field Of View</b>	12 X 12 cm		6 x 6 cm to 20 x 20 cm		6 x 6 cm to 20 x 20 cm
<b>Darkroom</b>	Fixed Camera Fixed Animal Stage		Z-Axis Motorized Camera X/Y-Axis Motorized Animal		Z-axis Motorized Camera 15° Tilting Sample Stage Adjustable pot holder
<b>Animal Capacity</b>	Up to 3 mice		Up to 5 mice (optional 10 mouse pad available)		Not Applicable
<b>Heated Stage</b>	Yes	Yes	Yes	Yes	Not Applicable

For the first ever all-in-one 2D and 3D BLI and VIS, NIR-I, and NIR-II FLI system, check out the Newton 7.0 FT-900!

# OPTICAL (NIR-II FLUORESCENCE)

## NEWTON FT-900

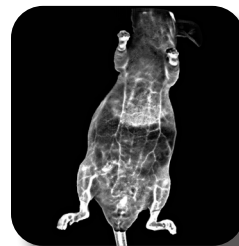


The **NEWTON FT-900** is the first deeply cooled CCD imager dedicated to both fluorescence and bioluminescence multispectral imaging for a wide range of in-vivo applications. Ideal for preclinical research, it provides non-ionizing and non-invasive visualization of biological processes in real-time in the visible, near and short-wave infrared spectrum (VIS/ NIR/ NIR-II). Whether your focus is oncology, immunology, infectious disease, neurology, or biodistribution studies, our all-in-one system accommodates them all.

This cutting-edge optical imaging system facilitates the penetration of NIR-II light deeper into small animal tissue with less autofluorescence resulting in clearer and sharper images, achieving 10 times greater photon penetration depth than visible fluorescence.

### Applications

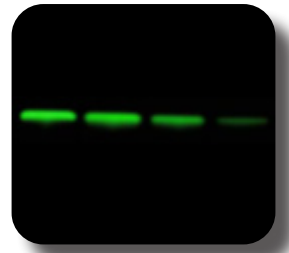
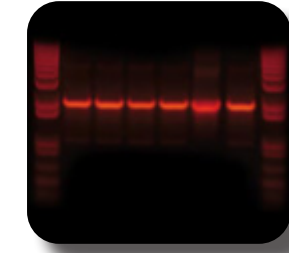
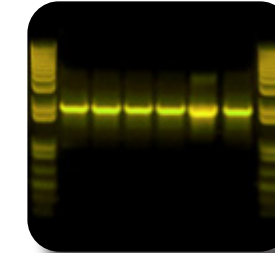
- Tumor and infection monitoring
- Cell migration tracking
- Detailed vascular blood flow maps
- Vasculature and microcirculation visualization
- Biodistribution and pharmacokinetics studies
- Drug dispersion
- Heart rate and breathing



Models	FT 900
<b>Imaging Modalities</b>	Ultimate sensitivity for advanced research with a dual-camera architecture. Designed for scientists seeking exceptional performance and the deepest insights in NIR-II imaging. <ul style="list-style-type: none"> <li>• 2D Bioluminescence Imaging</li> <li>• 3D BLI Optical Tomography</li> <li>• 2D VIS/NIR Fluorescence Imaging (400-900nm)</li> <li>• 2D NIR-II Fluorescence Imaging (900-1700nm)</li> </ul>
<b>Emission Filters</b>	14 high efficiency filters (customizable) <ul style="list-style-type: none"> <li>• 8 VIS Narrow-Bandpass filters (30nm) : 500/ 550/ 600/ 650/ 700/ 750/ 800/ 850nm</li> <li>• 6 SWIR filters (Long-Pass) : 1000/ 1100/ 1200 / 1300/ 1400/ 1500nm</li> </ul> Equipped with 15 positions motorized filter wheel
<b>Illumination Sources</b>	<ul style="list-style-type: none"> <li>• 12 excitation channels: 440/ 480/ 540/ 580/ 640/ 680/ 740/ 780/ 840/ 880/ 940/ 980nm</li> <li>• On-demand customization &gt; 1000nm</li> </ul>
<b>Lens</b>	Double cameras equipped with proprietary f/0.7 lens <ul style="list-style-type: none"> <li>• DarQ-11 Scientific grade 16-bit CCD camera (400-900 nm)</li> <li>• InGas SWIR CCD camera (900-1700 nm)</li> </ul>
<b>Field Of View</b>	<ul style="list-style-type: none"> <li>• Min. 6 x 6 cm ; Max. 20 x 20 cm</li> <li>• Z-Axis motorized camera for precise adjustments</li> <li>• X/Y-Axis motorized animal stage</li> <li>• Stainless steel darkroom with wide-access door (110° angle)</li> <li>• Equipped with all safety standards</li> </ul>
<b>Animal Handling</b>	<ul style="list-style-type: none"> <li>• Heated Mouse Pad (+20 to 37°C)</li> <li>• Individual animal breathers</li> <li>• 1 to 10 mice (also compatible with other small animals and other types of samples)</li> </ul>
<b>Acquisition and Analysis Software</b>	<ul style="list-style-type: none"> <li>• Advanced software for absolute quantification</li> <li>• Fully GLP and CFR21-compliant</li> <li>• Data export at 16-bit .tiff or 8-bit .jpg formats</li> <li>• 3D tomography module available</li> </ul>

# WESTERN BLOT & GEL DOCUMENTATION

## FUSION



- High sensitivity
- One-click to image
- Multiplexing capabilities
- Achieve quantitative results

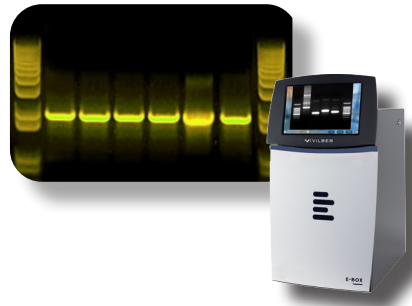
**FUSION Systems** are designed to overcome common challenges with chemiluminescent imaging and deliver quantifiable results. The highly sensitive camera and wide proprietary lens offer robust dynamic range and linearity, reducing noise for clear signal acquisition. With automated imaging adjustments, achieve consistent and reproducible data every time.

**Fully customizable: Talk with an Application Scientist today!**

FUSION ABSOLUTE FX6 / FX7	
<b>Description</b>	<i>The FUSION ABSOLUTE imaging system is tailored to meet high-sensitivity imaging needs for molecular biology and proteomics research. Equipped with either an integrated computer or PC-based, it offers versatility for advanced applications.</i>
<b>Applications</b>	<ul style="list-style-type: none"> <li>• Chemiluminescence: Western, Northern, and Southern blotting.</li> <li>• Bioluminescence: Ideal for luciferase applications.</li> <li>• Fluorescence: Supports multi-channel imaging with a choice of 9 Absolute Spectra Capsules.</li> <li>• Colorimetric Imaging: Compatible with colorimetric-stained gels, X-ray film, SSCP gels, colony dishes, and flasks.</li> </ul>
<b>Camera</b>	Custom scientific-grade CCD camera, zero-defect (Grade 0) <ul style="list-style-type: none"> <li>• Resolution: 20 megapixels, native resolution of 2838 x 2224 (FX6)   10 megapixels, native resolution of 2160 x 2160 pixels (FX7). Large pixel size for maximal sensitivity.</li> <li>• Custom Lens: Unrivalled optical lens with an aperture of f/0.70 for enhanced sensitivity.</li> <li>• Cooling: -55°C maximum cooling differential from ambient (-30°C absolute) (FX6)   -90°C maximum cooling differential from ambient (-65°C absolute) (FX7) and regulated cooling via a four-stage Peltier cooling system.</li> <li>• Field of View: Large field of view (up to 20 x 20 cm) for imaging multiple samples.</li> </ul>
<b>Fluorescence</b>	<ul style="list-style-type: none"> <li>• Choice of up to 9 Absolute Spectra Capsules (excitation sources) from 365nm to 780nm.</li> <li>• Narrow-bandpass emission filters.</li> </ul>
<b>Filter Wheel</b>	10-position motorized filter wheel
<b>Smart Darkroom</b>	<ul style="list-style-type: none"> <li>• Motorized lens and filter wheel for precise adjustments.</li> <li>• Z-axis motorized camera (automatic zooming and accessory recognition).</li> <li>• Steel darkroom with wide-access door, UV safety, and sliding tray.</li> </ul>
<b>Computer and Software</b>	<ul style="list-style-type: none"> <li>• Integrated Touchscreen Computer Optional.</li> <li>• Software: License-free software for acquisition, editing, analysis.</li> <li>• Advanced Bio-ID software for acquisition.</li> <li>• Data Export: 1-click to Excel, 16-bit TIFF format for image storage.</li> </ul>

# GEL DOCUMENTATION

## E-BOX



VILBER's **Gel Documentation** systems, made of stainless steel and aluminum, provide superior image quality for DNA and RNA gels using Super-Bright UV illumination and filter technology. These systems utilize fluorescence for gene expression and protein detection, efficiently separating excitation and emitted light to yield optimal sample images. Catering to a wide range of applications, VILBER offers technologies varying from basic to advanced, excelling in sensitivity, speed, and detection of DNA, RNA, and protein.

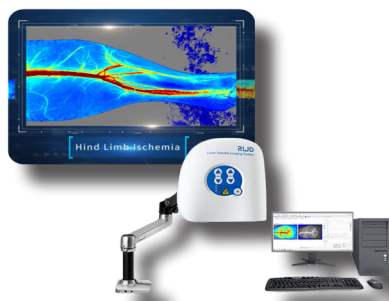
<b>Super-Bright UV Pad:</b>	DNA/RNA gel and stain imaging agents: Ethidium Bromide, Sybr-Safe, Sybr-Green, Gel-Red/Green, Sybr-Gold, GFP, Pro-Q Emerald, Sypro Ruby, FITC, DAPI.
<b>White Pad/light conversion screen:</b>	EPI white light applications (e.g., protein gels, X-Ray film, autorads, SSCP gels, colony/flask imaging): Coomassie Blue, Silver Stain, Autorads, Ponceau S Red, Copper Stain.
<b>Blue Pad:</b>	DNA/RNA detection (prevents DNA "nicking")

### Features

- State-of-the-art camera technology
- Free software
- One click to image
- High contrast medical grade touch screen display with magnesium reinforced protection glass

# BLOOD PERFUSION IMAGING

## LASER SPECKLE



The RFLSI-ZW **laser speckle** imaging system enhances micro-circulation research with advanced optics and algorithms, improving field size, image quality, frame rate, and resolution. Its non-contact LSCI technology provides efficient micro-circulation measurement for human and animal tissues, useful in studies like ischemic stroke and lower limbs. It offers multi-output including high-resolution images, videos, and quantified perfusion and vessel diameter data.

### Features

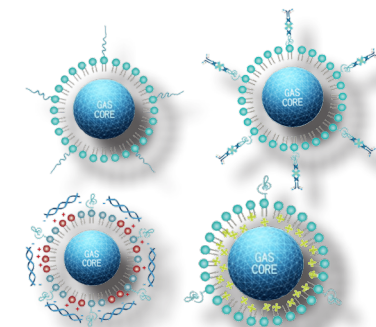
- No Contrast Agent Required
- Reliable Data Measurement
- Full-Frame HD Images & Video
- Quantified Visualize Data
- High-Speed Camera
- Easy Operation
- Fast Data Acquisition

### Applications

- Cerebral blood perfusion monitoring
- MCAO model assessment
- Cortical spreading depression observation
- Hind-limb ischemia research
- Organ microcirculation observation
- Skin burn/skin flap transplantation
- Skin allergies
- Septic Shock
- Chicken Chorioallantoic Membrane Assay
- Diabetic Foot

# MICROBUBBLE CONTRAST AGENTS

## USPHERE SERIES



The **USphere Series** of microbubble contrast agents are designed for preclinical imaging, catering to various species like mice, rats, rabbits, and non-human primates, effectively working at frequencies from 1 to 40 MHz. With a small size distribution (1.1-1.4 μm) and high concentration (~2.5×10<sup>10</sup> bubbles/ml), they are suitable for diverse applications, including perfusion imaging, targeted biomarkers, multi-modal imaging with fluorescent dyes, targeted drug delivery, and gene transfection.

These agents are optimized for small animal imaging, ensuring precise control over particle size and providing detailed perfusion information for tumor and organ imaging, drug development studies, and more.

### Applications

Perfusion Imaging

USphere Prime

Targeted Molecular Imaging

USphere Labeler

Multi-modal Imaging

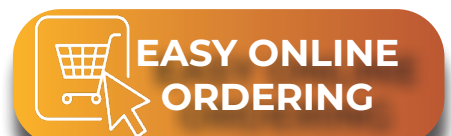
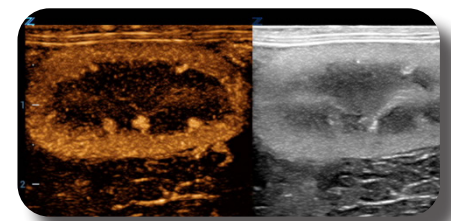
USphere Tracer

Drug Delivery & Gene Transfection

USphere Trans<sup>+</sup>

### Features & Benefits

<b>High concentration of microbubbles</b> per ml of activated contrast agent (~2.5×10 <sup>10</sup> bubbles/ml)	Recommended microbubble injection volume (1-20 μL) for small animals like mice or rats balances contrast enhancement and circulatory system safety. Dilution with sterile saline enables precise delivery in small amounts.
<b>Small size distribution</b> (1.1-1.4 μm) of activated microbubbles	Microbubble's small size ensures accurate microvasculature perfusion characteristics.
Once activated, the <b>microbubble concentration is stable for 72 hours</b> , when stored at 2-8°C	Microbubble stability for 3 days enables efficient utilization without wastage during required studies.
Microbubbles work at a <b>wide range of frequencies</b> (1-40 MHz)	Microbubbles are versatile and suitable for various species, including mice, rats, rabbits, non-human primates, and pigs, and have been successfully used on different ultrasound systems, supporting both linear and non-linear/harmonic contrast imaging modes.

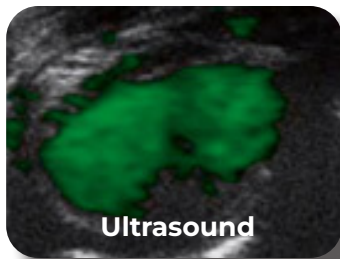
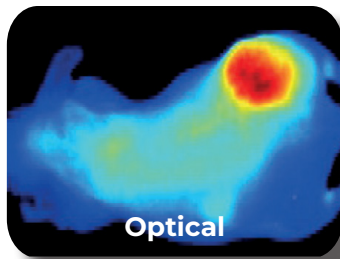
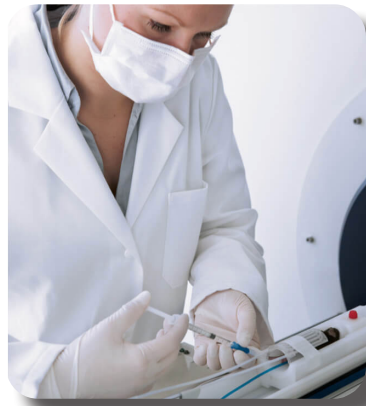


# CONTRAST AGENTS

Viscover™

**Viscover Contrast** Imaging Agents are specialized Contrast Agents for *in vivo* preclinical imaging and small animal research. We offer an exciting portfolio of specialized preclinical imaging agents covering major imaging modalities:

- **GadoSpin™ and FeraSpin™** contrast agents for **MRI**
- **ExiTron™** contrast agents for **CT**
- **PolySon™** contrast agents for **ultrasound**
- **NiraWave™** contrast agents for **optical imaging**

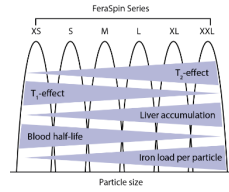


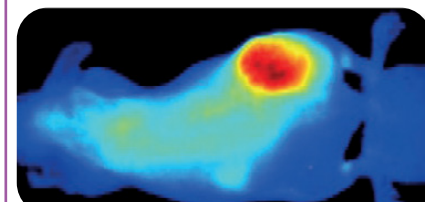
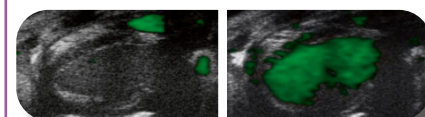
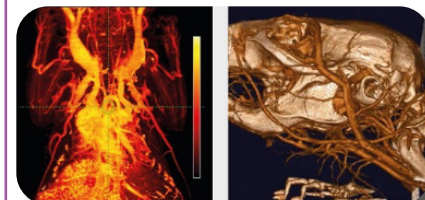
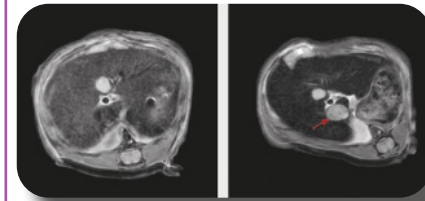
Contrast Imaging Agents	
<b>Applications:</b>	<ul style="list-style-type: none"> <li>• Oncology, cardiovascular, inflammation, and neurology research</li> <li>• Drug research and development</li> <li>• Human disease models in rodents</li> <li>• Contrast agent and imaging device research</li> <li>• Basic research – from <i>in vitro</i> to <i>in vivo</i></li> </ul>
<b>Save time:</b>	<ul style="list-style-type: none"> <li>• Draw up 100 µL of the agent for a mouse</li> <li>• Inject into the tail vein</li> <li>• Scan</li> </ul>
<b>Hassle-free imaging agents with reliable results:</b>	<ul style="list-style-type: none"> <li>• Ready-to-use with step-by-step instructions</li> <li>• Iso-osmolar sterile formulation</li> <li>• Single dose bolus administration</li> <li>• Excellent tolerability – only 100 µL injection volume</li> <li>• Same look and feel over the whole product range</li> </ul>
<b>Implementing the animal research paradigm:</b>	<p>Viscover developers are committed to animal welfare and the "3 R's" of animal research: Replace, Reduce, Refine. Imaging agents have been optimized to reduce the numbers of animals per study by yielding refined images while reducing time and expenditure</p>



Pair your imaging with precision delivery using Sentinel Nord catheters! Their leak-tested, easy-grip butterfly designs ensure optimal access, sterility, and control even during live imaging procedures.

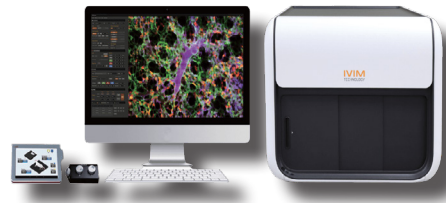
EASY ONLINE ORDERING

Modality Imaging Agents	
<p><b>MRI</b></p> <p>GadoSpin™ FeraSpin™</p>	<p>Our <b>GadoSpin</b> gadolinium chelate and <b>FeraSpin</b> iron oxide nanoparticle product families were designed to offer you previously unseen capabilities.</p> <p><b>Broad application spectrum includes:</b></p> <ul style="list-style-type: none"> <li>• Tumor vascularization and angiogenesis studies</li> <li>• Cardiovascular disease imaging</li> <li>• Delineation of tissues and organ-specific imaging</li> <li>• Magnetic resonance angiography (MRA)</li> <li>• Therapeutic efficacy monitoring</li> <li>• Nanoparticle physiology studies</li> <li>• MRI physics and sequence optimization</li> </ul> 
<p><b>CT</b></p> <p>ExiTron™</p>	<p><b>ExiTron</b> contrast agents have been specifically developed to provide micro-CT with long sought-after soft-tissue contrast. Novel nanomaterials help extend the application of any micro-CT far beyond mere bone scans.</p> <ul style="list-style-type: none"> <li>• Low viscosity of ExiTron nano products for superior CT</li> <li>• Exceptional high-resolution CT angiography</li> <li>• Long-term organ-specific (liver/spleen) imaging</li> <li>• Monitoring of cardiovascular pathologies</li> <li>• Tumor vascularization and angiogenesis studies</li> <li>• Imaging of brown adipose tissue</li> <li>• PET/CT imaging studies with enhanced soft-tissue CT contrast</li> <li>• Therapeutic efficacy monitoring</li> </ul>
<p><b>Ultrasound</b></p> <p>PolySon™</p>	<p><b>PolySon L, PolySon H</b> and <b>PolySon T</b> ultrasound agents are unique hard-shell ultrasound microbubbles with ideal physiological and contrast properties for all typical ultrasound methods.</p> <ul style="list-style-type: none"> <li>• Enhanced echogenicity</li> <li>• <b>PolySon L</b> is a hard-shell ultrasound microbubble agent, optimal for organ perfusion measurements and the visualization of liver and spleen</li> <li>• <b>PolySon H</b> offers you the same capabilities as PolySon L, but is optimized for imaging of the liver at high acoustic pressures</li> <li>• <b>PolySon T</b> is a hard-shell ultrasound microbubble agent that is optimized for imaging of tumors</li> </ul>
<p><b>Optical Imaging</b></p> <p>NiraWave™</p>	<p>NiraWave optical imaging agents are novel dyes and nanomaterials ideal for the study of vascular fine structure, disease-related vascular changes and tumors.</p> <ul style="list-style-type: none"> <li>• Quantum confinement in <b>NiraWave nano</b> products provides exceptional optical properties</li> <li>• <b>NiraWave C</b> is the animal imaging formulation of the clinical indocyanine green agent that has been used for angiography (eye), organ perfusion, rheumatology diagnostics, and photodynamic therapy research</li> <li>• <b>NiraWave M</b> is a unique micellar formulation of the clinical ICG dye with a long circulation time and is perfectly suited for the study of vascular leakage in inflammation</li> <li>• <b>NiraWave Rocker</b> is an innovative nanoparticulate optical imaging agent optimized for visualization of primary tumors and metastases</li> <li>• <b>NiraWave nano 780</b> is a nanoparticulate optical imaging agent developed for optical angiography that provides a broad excitation range, a high quantum yield, and the best possible tissue penetration</li> </ul>



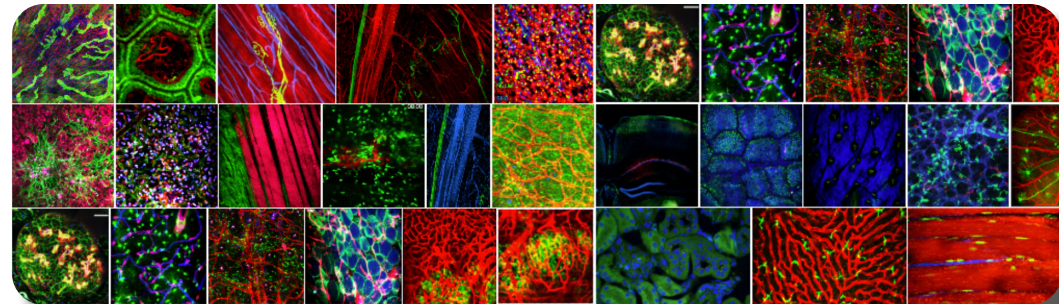
# INTRAVITAL MICROSCOPY

## IVM



**Intravital Microscopy (IVM)** is an all-in-one two-photon and/or confocal microscopy system designed and optimized for longitudinal imaging of live animal models.

Confocal IVM systems enable optical sectioning of *in vivo* tissue via rejection of out-of-focus fluorescence light coming from the background tissue which will result in images with high contrast and quality.



Animal well-being

Motion Compensation

User Friendly

4D Imaging

### Features & Benefits

<b>Integrated heated animal stage with physiological controller &amp; inhalation Anesthesia inlet/outlet:</b>	Ensures animal well-being throughout the imaging session and consistency between animals within a study, while enabling connection to an external inhalation anesthesia machine. It is compatible with all universal anesthesia machines.
<b>User-friendly ergonomics &amp; user interface:</b>	Allows for ease of use, and reproducible results by experts and non-experts.
<b>Ultrafast scanning:</b>	Track the movement of several cells <i>in vivo</i> to better understand the biological processes being examined.
<b>Motion compensation function:</b>	Provides enhanced image quality on imaging dynamic organs, automatically compensating for the effects of respiratory motions and brain pulse.
<b>Tissue stabilizing holders &amp; hardware:</b>	Optical exposure and stabilization of almost any organ on stage for time-lapse and longitudinal imaging, minimizing motion artifacts.
<b>4-color Simultaneous imaging:</b>	Multiplexity and simultaneous monitoring of various labelled elements within the tissue.
<b>4D Imaging:</b>	The software allows for acquisition of 3D stacks of moving objects over time and rendering it as a 4D image.

### Models

	IVM-C3	IVM-M3	IVM-CM3	IVM-MS3	IVM-CMS3
<b>Laser Type:</b>	Confocal Laser Unit	Tunable Two-Photon Laser Unit	Confocal Laser Unit Tunable Two-Photon Laser Unit	Compact Two-Photon Laser Unit	Confocal Laser Unit Compact Two-Photon Laser Unit
<b>Wavelength:</b>	405 nm (20 mW), 488 nm (20 mW), 561 nm (20 mW), 640 nm (20 mW)	690 – 1,050 nm	<b>For Confocal</b> 405 nm (20 mW), 488 nm (20 mW), 561 nm (20 mW), 640 nm (20 mW) <b>For Two-Photon</b> 690-1,050 nm	Fixed 920 nm	<b>For Confocal</b> 405 nm (20 mW), 488 nm (20 mW), 561 nm (20 mW), 640 nm (20 mW) <b>For Two-Photon</b> Fixed 920 nm

### Chamber Kits

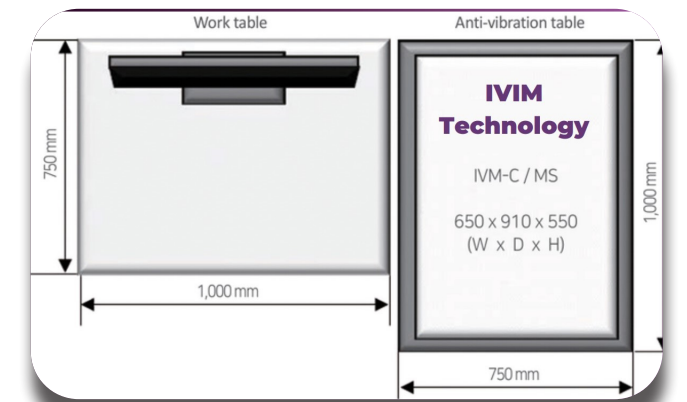
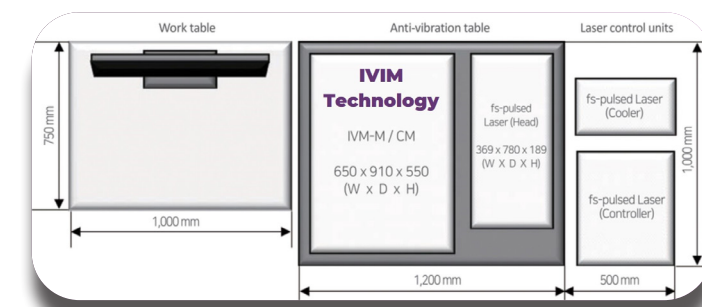
- *In vivo* imaging window chamber kits for long-term longitudinal imaging of various organs.
- Optically expose and stabilize organs for intravital imaging.
- Allows for continuous imaging over several weeks/months post-surgery.
- Minimizes the need for sacrificing animals after each session and promotes ethical research practices.
- Dynamic organ window chamber kit used for **lung**, **heart** and **uterus** utilizes micro-suction to stabilize tissue movement.

 <b>Dorsal Skinfold Chamber Kit</b> Cancer	 <b>Heart Imaging Chamber Kit</b> Heart	 <b>Lung Imaging Chamber Kit</b> Lung	 <b>Cranial Imaging Window Kit</b> Brain	 <b>Abdominal Imaging Window Kit</b> Internal Organ: Liver, Kidney, Spleen, etc.
 <b>Mammary Imaging Window Kit</b> Mammary Tissue	 <b>Pancreas Imaging Window Kit</b> Pancreas	 <b>Uterus Imaging Chamber Kit</b> Uterus	 <b>Staging Platform</b> Internal Organ: Liver, Kidney, Spleen, etc.	 <b>Thermo Glass Plate</b> Multi-use: Liver, Kidney, Lymph node, Ear skin, etc.

#### Tissue Motion Stabilizing System (TMS)

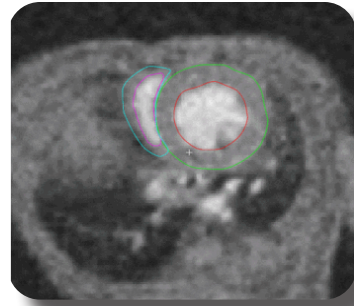
- Staging Platform provide a convenient method for *in vivo* observation of various organs including liver, intestine, spleen and pancreas
- Magnetic Base and adjustable height provides flexibility and stability to image the exposed tissue

- Dynamic organ window chamber Kit used for lung, heart and uterus utilizes micro-suction to stabilize tissue movement
- Tissue Motion Stabilizer (TMS) helps to maintain negative pressure between tissue and coverslip to prevent tissue movement during imaging.



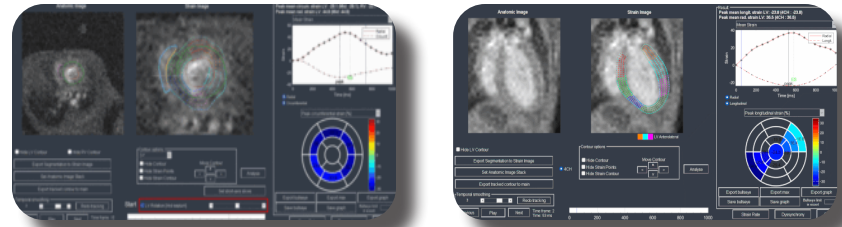
# IMAGE ANALYSIS SOFTWARE

## SEGMENT



**Segment application** is a comprehensive software solution for quantitative cardiac MR image analysis. The software has been specifically designed for use in preclinical research and will work with images acquired on our **M-Series MRI** systems. The Segment software employs advanced artificial intelligence (AI) algorithms to facilitate faster analysis of both left ventricle (LV) and right ventricle (RV) functions. In addition to systolic functional analysis, Segment has optional modules for delayed contrast-enhanced imaging with automatic scar segmentation, strain analysis, and many other tools.

Cardiac Function Analysis Software



## VIVOQUANT



**VivoQuant** is a vendor-neutral visualization, processing, co-registration, and quantification software suite developed by scientists for their peers. This versatile platform supports multi-modal and multi-species imaging, providing powerful tools for fine-tuning images, isolating and analyzing regions of interest, and more. With support for multiple image formats, including DICOM and 30+ native data formats, VivoQuant streamlines image analysis research studies across various imaging modalities, making it ideal for basic and translational research, including drug discovery.

**Fully DICOM compatible; along with 30+ other vendor-specific formats:**

Users may import image data from any number of preclinical imaging systems, support for both static and dynamic data sets.

**Multi-modality support:**

VivoQuant supports and overlays data from most imaging modalities including MRI, PET, SPECT, CT, and optical imaging.

**Integrated image analysis tools:**

Improve analyses using the multi-atlas segmentation (MAS) tool, K-Means Segmentation Algorithm, and Cortical Thickness Tool.

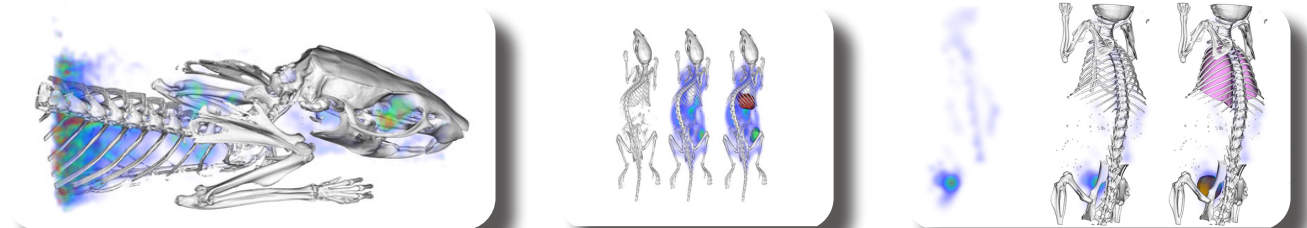
**Three-dimensional rendering function:**

Apply balancing, shading, orientation, color, and lighting parameters to enhance 3D image renderings for presentations and publications. (3D ROI).

- 3D Brain Atlas Tool
- Multi-Atlas
- Segmentation Tool
- Pharmacokinetic Modeling Tool
- Integration with iPACS

# IMAGE ANALYSIS SOFTWARE

## IMALYTICS PRECLINICAL



**Imalytics Preclinical** is a user-friendly software for fast interactive biomedical image data analysis, supporting 3D, 4D, and 5D data from various modalities. Advantages include optimized GPU processing for real-time 3D segmentations, an easy-to-learn interface with tutorials, and worldwide cloud-based accessibility for collaboration and remote work. It has been used to analyze (multi-modal) data sets from CT, PET, SPECT, MRI, US, FLT, and BLT.

### Features

<b>Pharmacokinetic modelling:</b>	<ul style="list-style-type: none"> <li>• Region-based fitting</li> <li>• Voxel-based fitting (parametric maps)</li> <li>• Patlak model</li> <li>• AIF generation, saving &amp; loading</li> <li>• One-Tissue compartment models</li> <li>• Two-Tissue compartment models</li> </ul>
<b>Relaxometry:</b>	<ul style="list-style-type: none"> <li>• Region-based fitting</li> <li>• Voxel-based fitting (parametric maps)</li> <li>• T1-model</li> <li>• T2-model</li> </ul>
<b>3D Printing:</b>	<ul style="list-style-type: none"> <li>• STL-export of image iso surface</li> <li>• STL-export of classes</li> <li>• Support generation</li> </ul>
<b>Bone analysis:</b>	<ul style="list-style-type: none"> <li>• Trabecular thickness &amp; separation</li> <li>• Bone statistics (Bone volume, bone volume fraction, bone surface, ...)</li> <li>• BMD calibration and measurement</li> <li>• Local thickness and separation map</li> </ul>
<b>Vascular analysis:</b>	<ul style="list-style-type: none"> <li>• Vessel tortuosity</li> <li>• Vessel diameter measurements along vessel</li> <li>• Vessel diameter feature maps (distance maps)</li> <li>• Vesselness feature map generation</li> </ul>
<b>Samples:</b>	<ul style="list-style-type: none"> <li>• Phantoms</li> <li>• Cells</li> <li>• Tissues</li> <li>• Organs</li> <li>• Bones</li> <li>• Tumors</li> <li>• Whole-body scans for insects, fish, birds, mice, rats, sheep, and other mammals</li> </ul>



- Signal Quantification
- High-throughput imaging 4 mice (or more)
- Kinetic Modeling
- Cardiac Imaging
- Integration with iPACS

# RESEARCH/THERAPEUTIC ULTRASOUND

## PRODIGY



The **Prodigy** is a compact, high-performance ultrasound system optimized for a variety of ultrasound engineering research applications. The Prodigy is available with either 128 or 256 transmit/receive channels, with support for multiplexing up to 1024 channels. In addition, standard (up to 170 Vpp, 0.2 W/ch) and high-power (up to 140 Vpp, 1 W/ch) configurations are available.

### High Power Transmit Modules



**ARF01-200**  
Single channel  
1-50 MHz transmit  
Up to 200 mJ PW mode



**ARF02-180**  
Single channel  
Up to 15 MHz transmit  
Up to 162 W CW mode

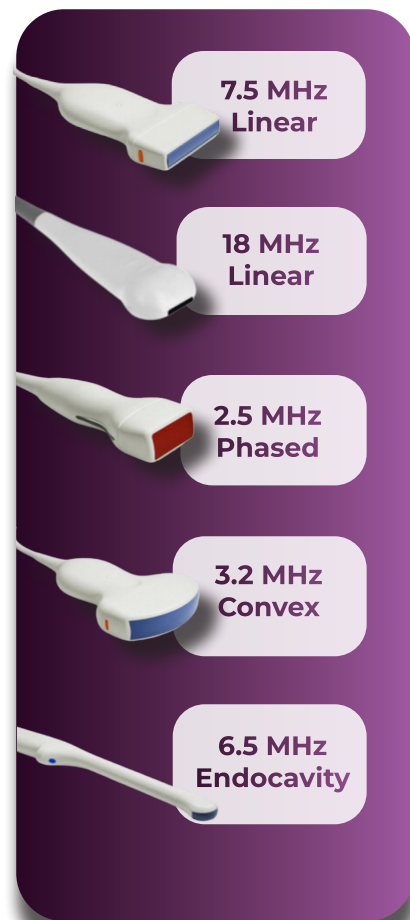


**HIFU256**  
256 transmit channels  
50KHz - 30MHz transmit  
Up to 11.5 W CW mode

### Features & Specifications

<b>Transmitter:</b>	<ul style="list-style-type: none"> <li>Frequencies: 1 KHz to 30 MHz <i>*Frequencies under 1 KHz can be discussed upon request</i></li> <li>True arbitrary transmit waveform with 4096 steps</li> <li>Time delay accuracy: up to 2.8 ns</li> </ul>
<b>Receiver:</b>	<ul style="list-style-type: none"> <li>Programmable gain range: -3~38 dB</li> <li>ADC sample: 16 bit, up to 125 MSPS</li> </ul>
<b>Embedded PC System:</b>	<ul style="list-style-type: none"> <li>High-performance CPU</li> <li>RAM: 64GB</li> <li>GPU: nVidia A4000 or faster</li> <li>PCIe Gen3, up to 10 Gbytes/sec</li> </ul>
<b>Probe Connectors:</b>	<ul style="list-style-type: none"> <li>One 256-ch ITT Cannon DLM6-360R</li> <li>Two 128-ch ITT Cannon DLM1-156R</li> <li>128-ch configuration uses half of the DLM6 and the second DLM1. <i>*Adapter boards are available upon request</i></li> </ul>
<b>External Interfaces:</b>	<ul style="list-style-type: none"> <li>Trigger in/out, clock output</li> </ul>
<b>Basic Imaging Modes:</b>	<ul style="list-style-type: none"> <li>B-Mode, M-Mode, Color Doppler, PW Doppler, Multi-Focus, Multi-Beam, Duplex and Triplex</li> </ul>
<b>System Dimensions:</b>	<ul style="list-style-type: none"> <li>342 x 382 x 398 mm</li> <li>Up to 39 kg</li> </ul>

### Probes



### Applications

- Advanced Imaging Modes**
- Pulse Sequence Mode
  - Trapezoidal or Steerable Scanning
  - Spatial Compounding
  - Harmonic Imaging

#### Shear wave elastography:

Shear wave imaging, including supersonic shear imaging and ultrafast plane wave imaging, can be implemented with programmable push beams and imaging sequences.

#### High intensity focused ultrasound:

High-intensity focused ultrasound (HIFU) can be performed using the Prodigy system when combined with any of the high-power transmit modules.

#### Pulse sequence programming:

Ultrasound pulse sequence programming provides flexibility in designing a variety of imaging modes where the parameters can be fully programmed. This feature is available with both an intuitive graphical user interface as well as through MATLAB, C#, C++ and Python.

#### Real-time channel data acquisition:

RF data can be acquired in all imaging modes. When using the pulse sequence mode, raw data can also be accessed using the built-in viewer or analyzed in MATLAB, C#, C++ or Python in real-time.

#### Compounding:

Prodigy allows spatial compounding up to nine prespecified steering angles.

#### Complex adaptive imaging:

Complex adaptive beamforming algorithms (e.g., MVDR based and/or coherence based) can be implemented in real-time on Prodigy using the embedded GPU. Both pre/post-beamforming algorithms can be implemented.

#### Harmonic imaging:

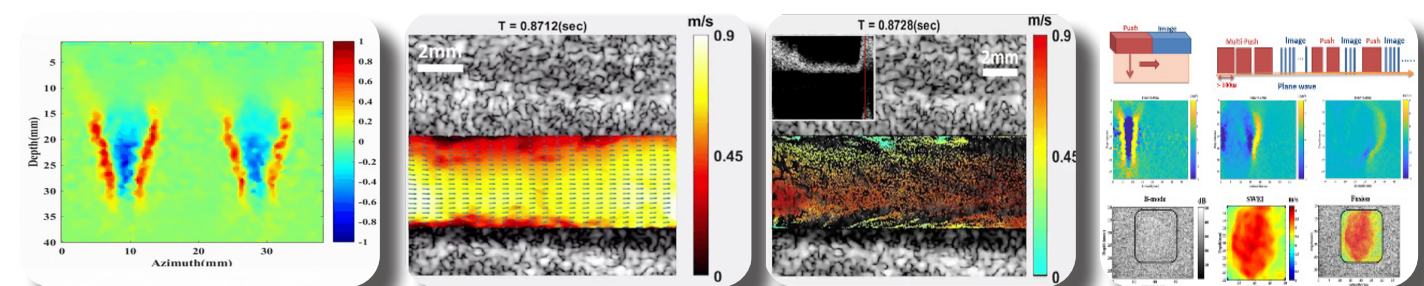
Harmonic imaging improves the image quality in terms of spatial and contrast resolutions. Both filter based and pulse-inversion (PI) based harmonic imaging can be implemented.

#### Coded excitation:

Coded excitation improves SNR and depth penetration. Codes can be arbitrarily designed using the arbitrary transmit waveform generator. The resulting sequence can also be arranged with different codes, enabling a variety of applications using coded excitation.

#### Synthetic aperture/total focusing method:

Prodigy allows a variety of synthetic techniques, such as synthetic transmit and receive aperture, sparse synthetic aperture, and random synthetic receive aperture, to be performed.



Shear Wave Elastography

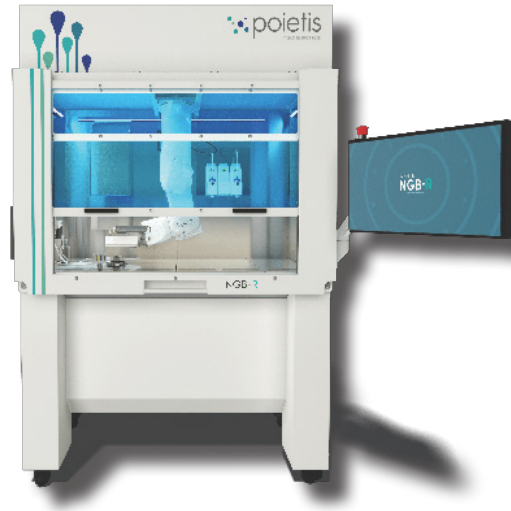
Conventional Arrow VFI

Particle Trajectory VFI

Shear Wave Elastography

# BIOPRINTER

## NGB-R



The **NGB-R** is a multi-modal, 3D bioprinting platform designed and developed to print live tissues and organs. Combining laser-assisted and extrusion bioprinting, the NGB-R enables true versatility of bioprinting (from cells to multi-cellular spheroids and organoids) and offers the possibility of using a large number of biomaterials and hydrogels.

The NGB-R includes an embedded microscope for in-line cell printing monitoring and relies on a complete software suite for managing bioprinting protocols, from biological CAD to data analysis of manufacturing.

The Next Generation Bioprinting NGB-R platform from Poietis has been developed to overcome current tissue manufacturing shortfalls and solve critical limitations of existing 3D bioprinting technologies, thanks to high resolution, precision and learning-based methods. This platform integrates automation and robotics, and numerous online sensors – including cell microscopy – and Artificial Intelligence processing.



Multi-modality



Robotic Assisted



Integrated Microscope

## Applications

### Regenerative Medicine Advanced Therapies:

Regenerative medicine is a rapidly growing field that involves replacing or regenerating damaged or diseased cells, tissues or organs to restore normal function.

### Drug Discovery & Therapeutic Testing:

Alternative to Animals  
New Approach Methodologies (NAMs)

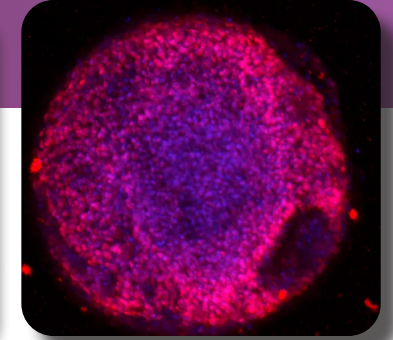
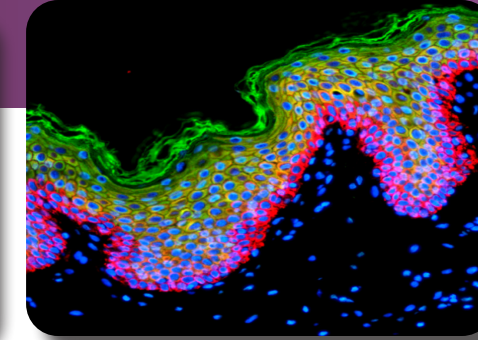
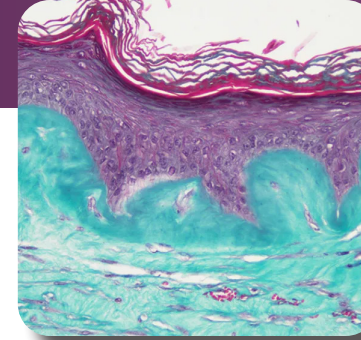
3D Bioprinted human tissues can bridge the gap in testing of therapeutics from preclinical animal models to in-human trials. In addition, the use of bioprinted tissue models allow for high-throughput screening of drugs.

### Disease Modelling:

3D Bioprinting can be used to fabricate *in vitro* 3D disease models, mimicking the structural and spatial features of the disease environment. This can be used to study the disease mechanism and test therapeutics.

### Aesthetic Medicine & Cosmetic Testing:

3D Bioprinted tissues can replace animal models for testing of cosmetic products. 3D bioprinted tissue fabricated out of human cells are more ethical for validation of aesthetic products.



## Features & Specifications

### Multi-Modality, Laser-Assisted, Bio-extrusion Bioprinting:

The NGB-R incorporates 3 different bioprinting techniques all in one system:

- Laser-assisted-bioprinting (LAB)
- Bio-extrusion

### High Cellular Viability: (>95%)

NGB-R's laser-assisted bioprinting technology is nozzle-free technique with no damage causing forces occurring in the process. As a result, cell viability reaches >95% and printed tissues become truly functional.

### High-resolution, Precision and Printing Speed:

NGB-R is the first commercially available laser-assisted bioprinting system, allowing users to deposit micro droplets of cell bioink with a precision of a few microns at predefined patterns.

### Integrated Microscopy & Image Analysis Platform:

The NGB-R can come with an optional built-in microscope to acquire images of each individual tissue layer at each step of fabrication.

### PickCell™ Module to Print Cell Aggregates and Spheroids

Designed to print 50-to-300µm cell aggregates or spheroids with high precision and throughput, PickCell™ combines AI with LAB to create complex 3D tissue models.

### Microfluidic Cartridge:

This optional module includes a microfluidic cartridge and an automatized pipette for homogenization and multi-cellular loading

### 6 Axis Robotic Arm:

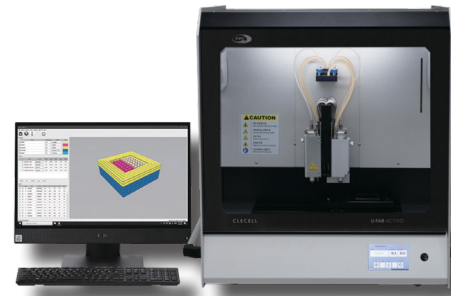
NGB-R is designed to address automation and reproducibility issues in tissue manufacturing; 6-axis robotic arm integrated within NGB-R allows semi to fully automated fabrication.

### Unique Software Suite:

Unique user-friendly HMI software Zebr4D™ to design complex tissues.

# BIOPRINTER

## U-FAB ACTIVO



The **U-FAB ACTIVO** bioprinting system features multiple modular printheads optimized for both droplet-based and filament-based bioprinting, enabling precise and controlled deposition of bioinks across a wide viscosity spectrum from low-viscosity cell-laden solutions to high-viscosity scaffold-forming biomaterials. The system features a patented nebulizing technology that enables additional distinct cross-linking strategies: pH-responsive, enzymatic, and chemical, besides UV LED, and heat-responsive methods.

Advanced bioprinting system designed for precision and versatility in 3D cell bioprinting



### Applications

#### 3D Soft & Hard Live Tissue Models

- Portfolio of soft and hard tissue models skin tissue models, cartilage
- High-precision, biomimetic patterning, personalized models
- Organoid models
- Medical device and prosthesis

#### Drug and Cosmetic Testing (Alternative to Animals) (NAMs)

- Physiologically relevant 3D human models
- Efficacy, toxicity, and mechanistic screening
- Portfolio of tissue models for cosmetics testing
- Supports validated NAM-based workflows

#### Disease Modeling

- Oncology, fibrosis, inflammation, neurovascular models
- Controlled microenvironment design

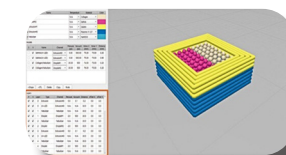
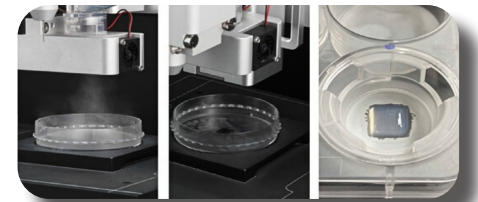
#### Biomaterial & Bioink Development

- Rapid prototyping of hydrogels and bioinks
- Precise droplet and pattern control

### Features & Specifications

#### 3D Stacking of Low Viscosity Biomaterials

The Droplet Dispenser can dispense low-viscosity biomaterials in droplet form, and with the use of a nebulizer, it can form polymer micro-particles (size: 4  $\mu\text{m}$ ) through neutralization/chemical/enzymatic cross-linking. Additionally, layer-by-layer crosslinking enables easy 3D stacking of low-viscosity materials through gradual curing.

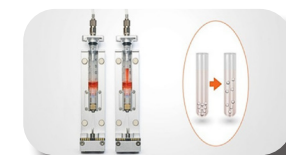
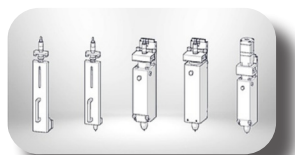


#### Independent 3D Modelling on Each Layer

Proprietary U-Studio enables independent layer-by-layer design, giving users full control over architectures and material composition for precise, customizable bioprinting.

#### Usability of Composite Materials

Equipped with 4 specialized printheads to process a wide range of biomaterials across varying viscosities and temperatures. This includes thermoplastics and polymers such as PCL and PLGA. Temperature range: 10–250 °C.



#### Cell Homogenization

By circulating the fluid mixture, density differences within the solution are prevented, ensuring uniformity during 3D printing and enabling consistent and high-quality output.

#### Automated Calibration & Build-plate Leveling

By automatically recognizing the surface height value of bioware and fine-tuning the X / Y coordinates between the nozzles used for output, highly stable extrusion 3D Printing can be achieved.

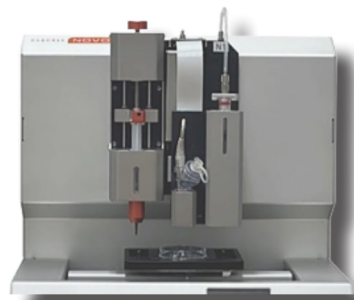


#### Nozzle Clean System

Fabric nozzle cleaner facilitates removal of residual matter and foreign materials in the nozzle. The flushing dish (35mm) makes it easy to clean syringes and valves, and maintains optimal output conditions.

# BIOPRINTER

## NOVO Bioprinting System



A compact version of the Activo Bioprinter equipped with 2 independent printheads and an integrated nebulizing system, specifically engineered for operation inside a biosafety cabinet. Its space-efficient design enables safe, sterile, and efficient bioprinting, while the nebulizing system ensures uniform cell or bioink distribution and enhanced construct viability. This system supports precise and reproducible fabrication of biological constructs, making it ideal for laboratories with limited space and strict biosafety requirements.



### Compact

- Designed to fit the BSC cabinet
- Ensuring convenience and flexibility in various laboratory environments



### User Friendly

- Uniform cell printing
- Dispenser technology ensuring uniform cell output and consistent results



### Various Cross-Linking Methods

- Nebulizing system
- Utilizing crosslinking methods based on pH, enzymes, and chemical (ionic) reactions

### SPECIFICATIONS

<b>3D Bioprinting Technology</b>	Temperature controlled, syringe-based extrusion, Pneumatic Droplet with Microvalve Base
<b>Printhead Volume</b>	Extruder : 3 mL- 5 mL *Droplet dispenser : 5 mL
<b>Printhead Pressure Range</b>	Extruder : up to 300 kPa Droplet Dispenser : up to 100 kPa
<b>Theoretical Volume Unit Step</b> (Extrusion)	0.1 µL
<b>Printhead Dispensed Volume CV</b> (Coefficient of Variation)	Extruder : < 10% @ 10 µL for water Droplet Dispenser : < 10% @ 10 µL for water
<b>Printhead Temperature Range</b>	Extruder : 10°C - 65°C Droplet dispenser : 15°C - 50°C
<b>Maintain Nozzle Tip Temperature</b>	Extruder : x Droplet Dispenser : o
<b>Nebulizer Crosslinking</b>	Nebulizer(pH, chemical, enzyme)
<b>Software</b>	U-Studio + Editor
<b>Operating Temperature Range</b>	15 - 30 °C
<b>Outer Dimensions (D x W x H)</b>	350 mm x 320 mm x 350 mm
<b>Weight</b>	17.8 kg

## Portfolio of Skin Tissue Models for Various Applications

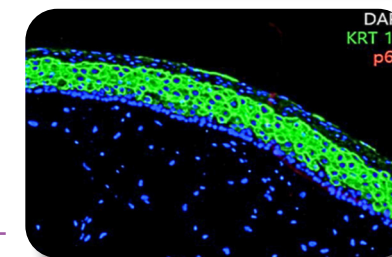
### Full Thickness Skin Model:

The full-thickness model is an artificial skin system that replicates both the epidermis and dermis. It is widely used for *in vitro* efficacy testing, including cosmetic and pharmaceutical evaluation, as well as for modeling skin regeneration processes such as burns and wound healing. CleCell employs induced pluripotent stem cells (iPSCs) to generate key cell types, including keratinocytes and fibroblasts, enabling the construction of a uniform and reproducible full-thickness skin model.



### Epidermis Skin Model:

The epidermis model, composed of keratinocytes, is primarily used in artificial skin models for assessing skin sensitivity to cosmetic ingredients and pharmaceuticals. CleCell utilizes induced pluripotent stem cells (iPSCs) to construct an epidermis model using differentiated keratinocytes, ensuring a uniform quality of cells.



### Customized Models such as Aged, Sensitive, Hair follicle model:

Customized skin models, including aged skin, sensitive skin, and hair follicle-integrated models, designed to replicate specific physiological and pathological conditions. These tailored models enable precise evaluation of efficacy, safety, and mechanisms of action for cosmetics, pharmaceuticals, and regenerative therapies, supporting targeted research and product development.

## Celluid Bioink

### Celluid GM

CleCell's Celluid GM is produced by synthesizing Gelatin, a natural polymer, with Methacrylate, and is available in a freeze-dried sponge form.

Celluid GM is available in two types, providing users with the flexibility to choose based on the viscosity requirements of the intended biological material or tissue for printing.

#### GM225



- 225g bloom based Gelatin (Bovine)
- Optimal for achieving outcomes with low elasticity

#### GM300



- 300g bloom based Gelatin (Porcine)
- Optimal for achieving outcomes with high elasticity

### Celluid AM

Celluid AM contains ALMA (Alginate Methacryloyl) and a photoinitiator, allowing the formation of 3D structures upon UV exposure. Users can adjust the concentration for various applications.

Celluid AM is widely used in the research of artificial tissue fabrication and can enhance cell adhesion and cell viability when mixed with GelMA.

#### AM



### Celluid GM + AM

The mixture of GelMA and ALMA allows for higher viscosity output, compared to GelMA bioink alone, due to the high viscosity characteristics of ALMA.

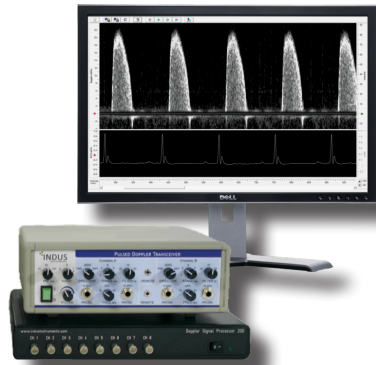
Furthermore, with high cell viability, the GelMA and ALMA combination facilitates the output of optimized structure for human tissue mimicry and cell culture.

#### GM+AM



# DOPPLER FLOW VELOCITY

## DFVS



The **Doppler Flow Velocity System (DFVS)** is a high-frequency, real-time pulsed Doppler device with integrated data analysis software for studying cardiovascular function in small animals. It offers excellent temporal resolution, making it ideal for studying fast heart rates and rapid blood accelerations.

This system has been successfully used with mice, rats, bats, naked mole rats, fish, and other small animals, and can also measure blood flow velocities in larger animals using implanted extra-vascular Doppler cuff probes.

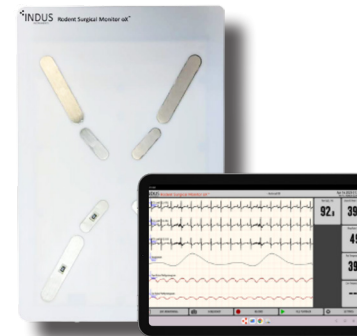


### Applications

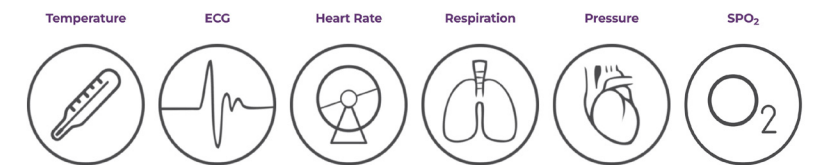
<p><b>Cardiac Function</b></p>	<p><b>Description:</b> Provides key cardiac functional measurements for fast and reliable phenotyping in small animal models.  <b>Area:</b> Myocardial Infarction, Heart Failure, Hypertrophy, Cardiomyopathy  <b>Flow Parameter:</b> Aortic Outflow Velocity, Mitral Inflow Velocity</p>
<p><b>Coronary Flow Reserve:</b></p>	<p><b>Description:</b> Perform high-quality assessments to evaluate coronary microvascular dysfunction.  <b>Area:</b> Myocardial Ischemia, Pressure Overload-Hypertrophy, Atherosclerosis  <b>Flow Parameter:</b> Hyperemic/Baseline Coronary, Flow Velocity Ratio</p>
<p><b>Arterial Stiffness: (Pulse Wave Velocity)</b></p>	<p><b>Description:</b> Simultaneous dual-probe imaging allows measurement at two vascular sites of interest in real-time, ensuring integrated and accurate vascular stiffness measurements.  <b>Area:</b> Hypertension, Atherosclerosis  <b>Flow Parameter:</b> Flow velocity routinely measured from aortic arch, abdominal aorta, carotid artery, or femoral artery</p>
<p><b>Pressure-Overload: (Stenosis)</b></p>	<p><b>Description:</b> A unique pencil-sized probe enables quick and accurate imaging of carotid and aortic arch blood flow changes in TAC banding models, supporting quick confirmation of surgical success and classification of banding severity.  <b>Area:</b> Transverse Aortic Constriction (TAC) Model  <b>Flow Parameter:</b> Carotid (R/L) peak velocity ratio, Stenotic jet velocity-estimation of pressure gradient across stenosis</p>
<p><b>Peripheral Artery Disease and Perfusion:</b></p>	<p><b>Description:</b> Measures precise blood flow velocity in multiple vessels of interest, enabling assessment of ligation models, therapeutic evaluation, and other hemodynamic studies.  <b>Area:</b> Renal, Carotid, Iliac, Femoral and Saphenous Vein Flow Velocities  <b>Flow Parameter:</b> Flow Velocities in peripheral vessels before &amp; after a surgical intervention or during therapeutic response</p>

# RODENT SURGICAL MONITOR

## RSM+ & RSM oX



The **Rodent Surgical Monitor (RSM+ & RSM oX)** are advanced, integrated surgical warming and vital signs monitoring solutions for preclinical research in mice, rats and other similarly-sized animals. These systems provide detailed information, in real-time, for the subject body temperature, ECG, heart rate, blood pressure and respiration. The systems incorporate intelligent zone heating, ultra-low noise, high-resolution ECG electronics, non-invasive electrodes, and a port for external needle or clip electrodes when the subjects cannot be laid prone or supine.



### 3 Main Components:

- Touchscreen Display
- Heated Surgical Platform
- Temperature Probe

### Patented Oximetry Technology

Patented pulse oximetry sensors are integrated into the platform's electrodes for non-invasive measurement of oxygen saturation



### New Look!

- Reduces noise and interference issues
- Strong & durable platform
- Scratch resistant surface
- Lighter



### Features

<p><b>Animal Health and Welfare Compliance</b></p>	<ul style="list-style-type: none"> <li>• Helps researchers comply with ethical guidelines and animal welfare regulations.</li> </ul>
<p><b>Anesthesia Monitoring</b></p>	<ul style="list-style-type: none"> <li>• Prevents complications like respiratory depression, which can affect both animal survival and data quality.</li> </ul>
<p><b>Cardiopulmonary Research</b></p>	<ul style="list-style-type: none"> <li>• Provides a direct readout of how disease or treatment affects oxygen delivery in the body.</li> </ul>
<p><b>Real-Time Monitoring</b></p>	<ul style="list-style-type: none"> <li>• Reduces variability and enhances reproducibility of studies.</li> <li>• Clearly labelled numeric panels and measurement waveforms make it easy to monitor critical parameters.</li> </ul>
<p><b>Easy Documentation</b></p>	<ul style="list-style-type: none"> <li>• Define optimal study conditions and ensure consistency between subjects and collaborating labs.</li> </ul>
<p><b>Versatile</b></p>	<ul style="list-style-type: none"> <li>• ECG and respiration monitoring options for mice, rats, dogs, cats, pigs, cows, etc.</li> </ul>
<p><b>Standalone Data Collection</b></p>	<ul style="list-style-type: none"> <li>• Capture data, make comments and view recordings on the tablet to quickly take measurements and verify experiment details.</li> </ul>
<p><b>Flexible</b></p>	<ul style="list-style-type: none"> <li>• Expansion modules allow you to easily add functionality later as your lab and study's needs change.</li> </ul>
<p><b>Dynamic</b></p>	<ul style="list-style-type: none"> <li>• Responsive electronic heating can respond to changing lab conditions within seconds, not minutes.</li> </ul>

# ATMOSPHERIC CONTROL

## Anaerobic Chambers

### BugBox



The **BugBox** is the ultimate solution for microbiologists facing high workloads. With a gloveless Ezee Sleeve™ port system and energy-efficient lighting, easily read plates without oxygen exposure.

Its compact size fits small labs perfectly, while adjustable temperature and humidity create an ideal cell growth environment. Add active O<sub>2</sub> monitoring for precise control of anaerobic conditions

270 Plate Capacity

- 0.5 m<sup>2</sup> / 5.77 ft<sup>2</sup> bench footprint
- 30 plate capacity interlock
- Intuitive touchscreen interface
- Lower cost per plate compared to jars

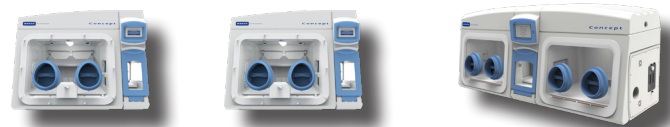
### Concept



The range of **Concept** workstations are rigorously tested for maximum productivity in anaerobic or microaerophilic incubation. Packed with innovative features to study sensitive microbes, it's perfect for culturing obligate anaerobes in various situations.

The modular design offers flexibility to expand and upgrade workspaces, making it easy to use and adaptable. Save time with fast interlock purge cycles and the Single Plate Entry System (SPES™) for efficient patient sample handling in correct anaerobic conditions.

- Internal HEPA Filtration
- Pop-Off™ Front Cover
- Ezee Sleeve™
- Optical O<sub>2</sub> Sensors
- Touchscreen Control
- Single Plate Entry System (SPES™)



Models	C400	C500	C1000
<b>Working Volume:</b>	210.3 L	210.3 L	Two independently controllable chambers 210.3 L each
<b>Interlock Capacity:</b>	26 L interlock holds	41 L interlock capacity	49 L Central interlock capacity
<b>Internal Sockets:</b>	3 Internal Sockets		6 Internal Sockets

# PHYSOXIA & HYPOXIA CONTROL

## Cell Culture Chambers

### InvivoO<sub>2</sub>



The **InvivoO<sub>2</sub>** workstation enables intricate cell interaction studies under optimal oxygen conditions, simulating environments like blood vessels or lung tissue. User-friendly and adjustable, it's ideal for cell culture applications that need precise oxygen control, offering stable user-defined environmental regulation and direct inner chamber access.

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>• Apnea/Apnoea</li> <li>• Pulmonary Fibrosis</li> <li>• ADHD</li> <li>• Sleep Apnea</li> <li>• Ocular Angiogenesis</li> </ul> | <ul style="list-style-type: none"> <li>• Apnea of Prematurity</li> <li>• SIDS (Sudden Infant Death Syndrome)</li> <li>• Ischemia</li> <li>• Occupational Hypoxia</li> </ul> | <ul style="list-style-type: none"> <li>• Atherosclerosis</li> <li>• Developmental Disabilities</li> <li>• COPD</li> <li>• Recreational Hyperoxia</li> </ul> |
|--|---|---|



#### I300

- Mimic Physiology: O<sub>2</sub> Control – from 0.1% to 30.0%
- Pop Off™ Front
- Intelligent Interlock – 10.7 L Capacity
- Compact Footprint – Can be used in even the smallest laboratory spaces.



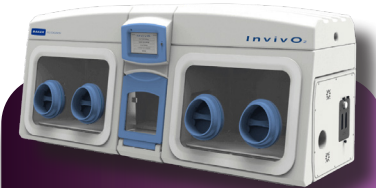
#### I400

- Mimic Physiology: O<sub>2</sub> Control – from 0.1% to 23.0%
- Pop Off™ Front
- Control CO<sub>2</sub>, Temperature and Humidity
- Internal HEPA Filtration
- Intelligent Interlock – 26 L Capacity



#### I500

- Mimic Physiology: O<sub>2</sub> Control – from 0.1% to 23.0%
- Pop Off™ front
- Control CO<sub>2</sub>, Temperature and Humidity
- Internal HEPA Filtration
- Intelligent Interlock – 41 L Capacity



#### I1000

- Mimic Physiology: O<sub>2</sub> Control – from 0.1% to 23.0%
- Pop Off™ front
- Control CO<sub>2</sub>, Temperature and Humidity
- Internal HEPA Filtration
- Intelligent Interlock – 49 L Capacity
- Two Independent Controllable Chambers

### SCI-tive



The **SCI-tive** hypoxia workstations enhance stem cell culture quality by maintaining consistent oxygen, temperature, and pH conditions. They mimic *in vivo* conditions and allow for the study of complex cell interactions. These workstations offer a spacious environment for all stages of cell culture, and can accommodate various equipment, replacing open bench work. Optional features include a HEPA filtration for a clean work area and an enhanced containment package for user safety.

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>• Internal HEPA filtration to Class 4 (ISO 14644-1)</li> <li>• The system logs data every minute, recording time, date, O<sub>2</sub> and CO<sub>2</sub> levels (set/actual), humidity, and temperature</li> <li>• Ezeeyin Glove ports for direct hand access</li> <li>• Multi-cable gland (up to 6 individual cables)</li> </ul> | <ul style="list-style-type: none"> <li>• Removable from 420 L usable chamber volume</li> <li>• CO<sub>2</sub> control (from 0.1% to 30.0% in 0.1% increments)</li> <li>• Ultrasonic Humidity control (from ambient to 85% RH)</li> <li>• Detox sachet (large)</li> <li>• Temperature control (5 °C above ambient to 45.0° C in 0.1° C increments)</li> </ul> | <ul style="list-style-type: none"> <li>• Interlock has O<sub>2</sub> control and heating</li> <li>• Internal power sockets x3</li> <li>• O<sub>2</sub> control (from 0.1% to 23.0% in 0.1% increments)</li> <li>• Gas sample port</li> <li>• Vacuum port connector</li> <li>• Alarm settings</li> <li>• Light control (on/off, dimming function)</li> </ul> |
|--|--|---|

## PHYSOXIA & HYPOXIA CONTROL Cell Culture Chambers

### OxyGenie



**OxyGenie** is a miniaturized, portable low-oxygen culture system for animal, plant, and bacterial studies. It enables short-term physiological oxygen- and temperature-based studies, particularly useful for high-resolution microscopy or irradiation under relevant conditions. The system features 6 culture wells enclosed for physiological growth, situated on microscope glass for flexible experimental adaptation. It's an accessible tool for start-up validation or proof-of-concept physiological cell culture experiments.

The **PhO<sub>2</sub>x Box** is a new, easy to use and economical Physoxia/Hypoxia system designed for *in vitro* cell culture experiments. PhO<sub>2</sub>x Box comprises a Gas Controller (with both O<sub>2</sub> and CO<sub>2</sub> control) and a Cell Culture Chamber.

The Cell Culture chamber can be placed on a lab bench, or be placed inside an Incubator or a Workstation, while the Gas Controller remains outside. The Cell Culture Chamber has removable shelving and can accommodate microtiter **well plates, small flasks and petri dishes.**

### PhO<sub>2</sub>x Box



### ReCO<sub>2</sub>ver™



The **ReCO<sub>2</sub>ver™** and **ReCO<sub>2</sub>ver™ Plus** incubators are designed to offer precision control over cell culture conditions and provide rapid recovery after interruptions. They aim to minimize the impact of door openings that disrupt the environmental parameters essential for cell growth, thus ensuring the integrity of your work.

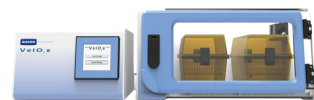
Precision in temperature, gas and humidity as well as the rapid recovery of those conditions after door openings are crucial for ensuring cells are exposed to a constant environment required for their well-being.

The **CondoCell** is an isolation box for sensitive cell cultures, providing a stable environment with consistent temperature, humidity and gas conditions. Compatible with any incubator or hypoxia workstation, it enables uninterrupted culture and minimizes cross-contamination risks.

### CondoCell



### VeLO<sub>2</sub>x



The **VeLO<sub>2</sub>x** system has been engineered to provide an isolated and highly controlled oxygen environment to small animal models (i.e. mouse and/or rat). By directly mimicking the oxygen conditions experienced across a wide variety of disease or treatment models, the VeLO<sub>2</sub>x grants researchers a better understanding of how O<sub>2</sub> levels affect various conditions such as sleep apnea, systemic hypertension, pulmonary dysfunction, and ischemia to name a few.

- Full control of oxygen levels
- Easy to use
- Rapid changes in O<sub>2</sub> levels
- Animal Welfare

## INCUBATOR DECONTAMINATION

### MycoFog®



The **MycoFog** system is an easy to use, hands free method of disinfecting tissue culture incubators for all biological contamination.

Labs that need a fast, simple, and cost-effective way to decontaminate their cell culture incubators will find our product an indispensable adjunct to their contamination control protocol.

The MycoFog biodecontamination system comprises an instrument (MycoFog) that generates hydrogen peroxide vapor or H<sub>2</sub>O<sub>2</sub> from prepacked, ready-to-use, light- and air-sealed recyclable bottles of a proprietary hydrogen peroxide formulation. MycoFog allows incubator users to quickly, easily, and effectively biodecontaminate their incubators, gloveboxes, and closed workstations of bacteria, mycoplasmas, yeast, fungi, and viral contaminants. With regular use, the spread of contaminations that compromise experimental outcomes can be prevented.

Active spores of *Geobacillus stearothermophilus* are more resistant to being killed than normal Mycoplasma seen in incubator contamination. These can be included and can be used as a good validation measure to confirm that proper decontamination is occurring regularly.



#### Fast & Effective

Decontaminates your incubator in just 180 minutes



#### Easy to Use

Simply pour in the reagent, place the instrument inside your incubator, press start and walk away



#### Safe and Non-toxic

Uses a low temperature hydrogen peroxide fog that is safe for lab equipment and leaves no residue



#### Low Cost

A cost-effective solution for preventing and eliminating incubator contamination

### Use the MycoFog in Workstations and Hypoxic Chambers

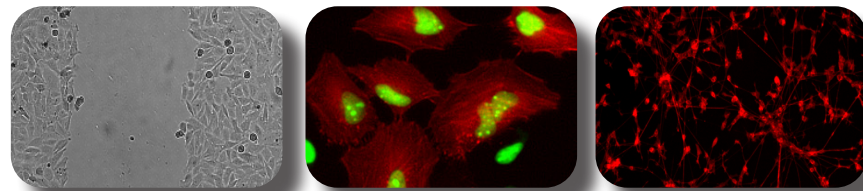


# AUTOMATED LIVE CELL IMAGING

## CELLOGER Series



The Celloger is an innovative Live Cell Imaging System with high-quality image and unmatched convenience. By enabling real-time cell monitoring inside the incubator, it allows for seamless observation and tracking of cellular dynamics without disrupting the natural growth environment. The Celloger is equipped with an advanced fluorescence and bright-field microscopy, autofocus, time-lapse function, real-time multi-position imaging and intuitive interface.



### Applications

• Cell proliferation	• Wound healing	• Transfection efficiency	• Apoptosis
• Phagocytosis monitoring	• Mitosis arrest	• Actin depolymerization	• Mitochondrial membrane potential
• Adipogenesis monitoring	• Spheroid formation	• Spheroid cytotoxicity	• Fungal mycelial cell observation

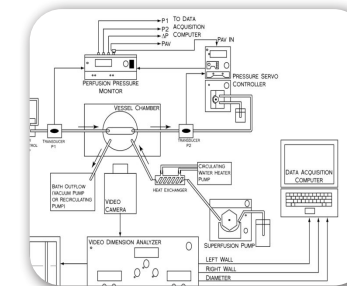
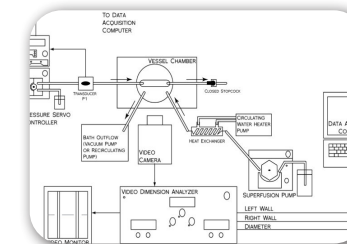
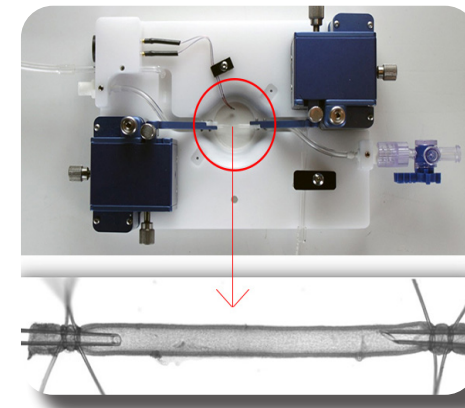
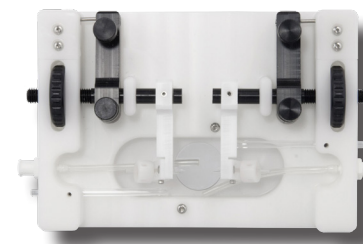


Models	Celloger NANO	Celloger MINI-PLUS	Celloger PRO	Celloger STACK
<b>Image Mode:</b>	Bright-field, Single color Fluorescence (Green/Red)	Bright-field, Single color Fluorescence (Green/Red)	Bright-field, Dual color Fluorescence (Green and Red)	Bright-field
<b>Camera:</b>	1.25 MP CMOS	5 MP CMOS	5 MP CMOS	5 MP CMOS
<b>Position:</b>	Single	Multiple	Multiple	Multiple
<b>Stage type:</b>	Manual XY, automatic Z	Automatic XYZ	Automatic XYZ	Automatic XYZ
<b>Focus:</b>	Manual and Autofocusing	Manual and Autofocusing	Manual and Autofocusing	Manual and Autofocusing
<b>Objective Lens:</b>	2X/ 4X / 10X	2X/ 4X / 10X	Set of 2X, 4X and 10X	2X
<b>Vessels Holder:</b>	96 well plate, flasks and slides	96 well plate, flasks and slides	96 well plate, flasks and slides	Multi-layer vessel types

# MICROVASCULAR RESEARCH

## Pressure Arteriography

**Pressure Arteriography** is the gold-standard for studying blood vessel function, reactivity, and mechanics. Living Systems Instrumentation is a leading provider of complete systems, ensuring quick setup and reliable results. Most applications use constant pressure, no intraluminal flow setup with an occluded distal end. For intra-vascular flow, a pump and pressure monitoring are needed.



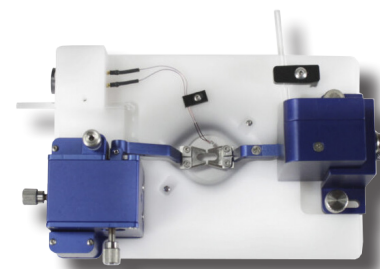
### Vessel Chambers

- Single Vessel Chamber
- Dual Vessel Chamber
- Linear Alignment Vessel Chamber
- Self Heated Single Vessel Chamber
- Self Heated Dual Vessel Chamber
- Linear Alignment Vessel Chamber

### Special Vessel Chambers

- Linear Alignment Large Vessel Chamber
- Axially Rotating Single Vessel Chamber
- Quick Transfer Single Vessel Chamber
- Perfusion Chamber with Metal Block for Magnetic Accessories
- Sealed Single Vessel Chamber
- Sealed Vessel Self Heated Chamber

## Wire Myography



**Wire Myography** is an *in vitro* technique to study small resistance arteries' functional responses and vascular reactivity. Living Systems Instrumentation offers the classic Halpern/Mulvaney style wire myograph, faithful to the original design but with modern advancements. Their myographs support various tissue types, making them suitable for different applications, including force measurements in micro vessels, large arteries, airways, and more. Explore Living Systems' wire myograph options for comprehensive vascular research.

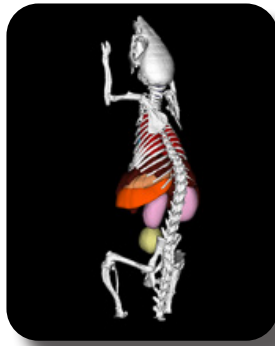
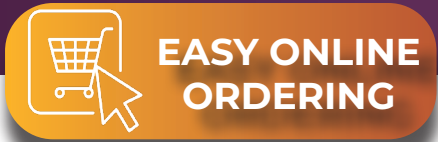
The **MYO-SC-1 Force Transducer Signal Conditioner** converts force measurements from the MYO-CH wire myograph chamber's force transducer into an analog voltage for recording with an analog-to-digital converter or chart recording device

### Myograph Packages

- Single Channel
- Single Channel Self-Heated
- Two Channel Self-Heated
- Four Channel Self-Heated

# OTHER RESEARCH PRODUCTS

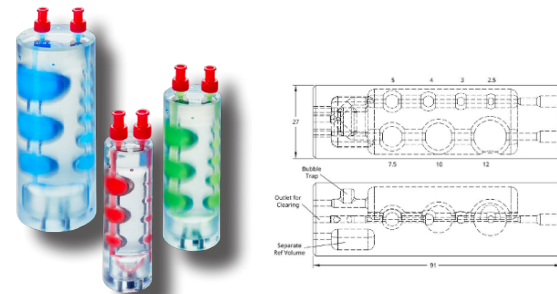
## Phantoms



From our partial volume correction (PVC) phantoms (shown at left) to our Derenzo pattern resolution phantoms, featuring patented technology, we offer a variety of innovative yet standardized products to choose from. In addition to making these standard phantoms available to you, we value working with your business or institution to develop custom solutions. Click below to find out more about our unique phantoms that are available now.

### Partial Volume Correction (PVC) Phantoms

The micro PVC phantoms are available in 3 sizes (27 mm OD, 34 mm OD, and 49 mm OD). The 27 mm OD version is shown below for more detail. All units are in mm unless otherwise noted. These phantoms consist of one custom manufactured component and three separate pieces of commercial hardware for assembly.



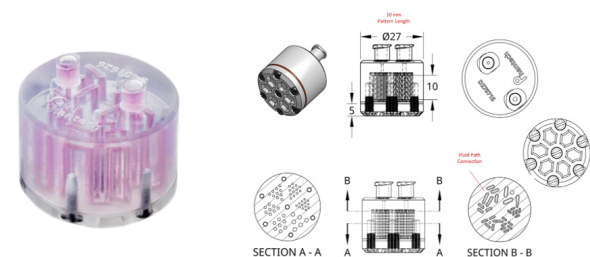
### Bio-Mouse™ Phantom

The first fillable biomimetic mouse phantom with Computed Tomography (CT) Hounsfield Unit (HU) density-equivalent bone and soft tissue. This phantom can be customized to include/exclude the following organ/tissue voids: tumor(s), brain, heart, lung, liver, spleen, stomach, kidneys, bladder, and a background region.



### Micro Derenzo Pattern Phantoms

These phantoms are used to characterize an imaging system's resolution by measuring the FWHM of hole patterns with varying diameters and spacing. Holes within a size group are spaced at exactly 2D (twice the diameter) apart. These phantoms feature six different hole sizes arranged in triangles around the center of phantom. These phantoms also feature our patented Linear-Filling Technology.



# ANESTHESIA PRODUCTS & SOLUTIONS

### Multi-function Anesthesia Solution

Scintica offers anesthesia systems that are compatible with various imaging systems, surgical needs, and different animal models being utilized. Whether looking to replace accessories or for complete anesthesia setups, these systems are designed with the researcher in mind to provide ease of use, and to deliver accurate anesthetic concentration. We offer both small and large animal solutions.



### Vaporizers

Research-grade anesthesia vaporizer, either isoflurane or sevoflurane, that is engineered for precision and reliability. This advanced vaporizer delivers accurate control of anesthetic gas concentration for consistent performance across a range of conditions. Its design ensures stable output unaffected by changes in flow, temperature, or pressure - providing dependable results for even the most demanding research and veterinary applications.

- No installation required: ready to use out of the box.
- Stable output regardless of temperature, flow, or pressure.
- Vaporizer individually inspected and accompanied by a detailed report & CE-marked for the EU compliance.



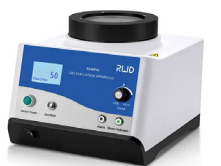
### Air Pump and Oxygen Concentrator

Easily integrate air pumps and oxygen concentrators into anesthesia setups for a continuous, on-demand source of air or oxygen with the push of a button, eliminating the need for bulky, compressed oxygen canisters. The high purity oxygen is separated from the air by molecular sieve pressure swing adsorption (PSA) technology. ROC-5A/ROC-8A Veterinary Oxygen Concentrator is designed specifically for veterinary use. The high purity oxygen is separated from the air by molecular sieve pressure swing adsorption (PSA) technology.



### Active Gas Scavenging

The gas evacuation apparatus was designed to safely and actively remove waste gas associated with everyday inhalation anesthesia. The waste gas from mask and induction chamber can both be pulled through an activated charcoal canister so that the air can be re-circulated into the room. The newest design has been upgraded to offer a wider range of exhaust flow, low noise, and exquisite exterior design.



### Portability

Free up bench space and add mobility to your anesthesia system by adding a trolley. This trolley conveniently and ergonomically holds all anesthesia components (vaporizer, gas supply, induction chamber, and waste gas scavenger).



# LAB CONSUMABLES

# NOTES

## Dissection Dishes



Use our high-quality, tack and bubble-free silicone-coated dissection dishes.

## Dissection Pins



Stainless-steel dissection pins well-suited for a variety of applications.

## Glass Cannula Packs



High quality glass hand-made pipettes. Tips are ground and polished to have a distinct beveled edge, which facilitates vessel cannulation.

## Catheters



Preclinical catheters for injections, sample collections, or to be combined with imaging systems for contrast imaging.

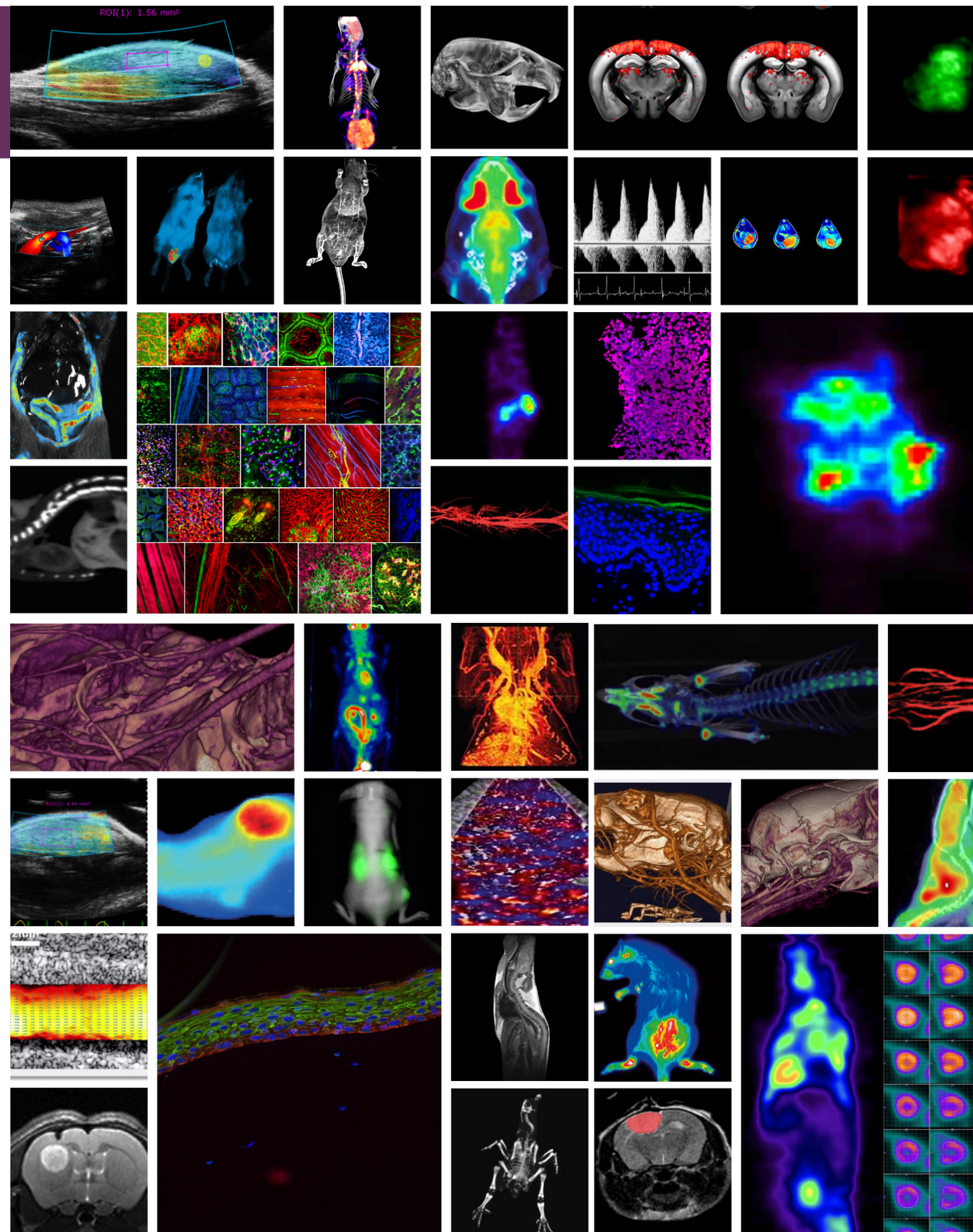


Scintica:



Lined area for taking notes.

# NOTES



## Get In Touch



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