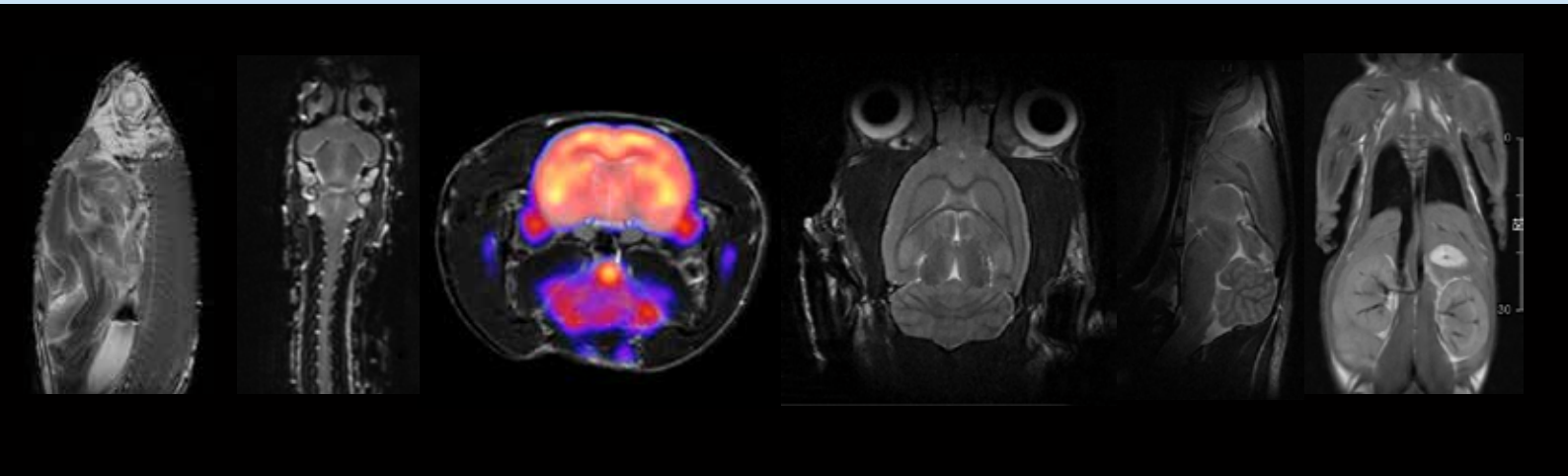
MR SOLUTIONS

Imaging INNOVATION

Innovative Technology For Preclinical Imaging

Powerful Yet Simple To Use

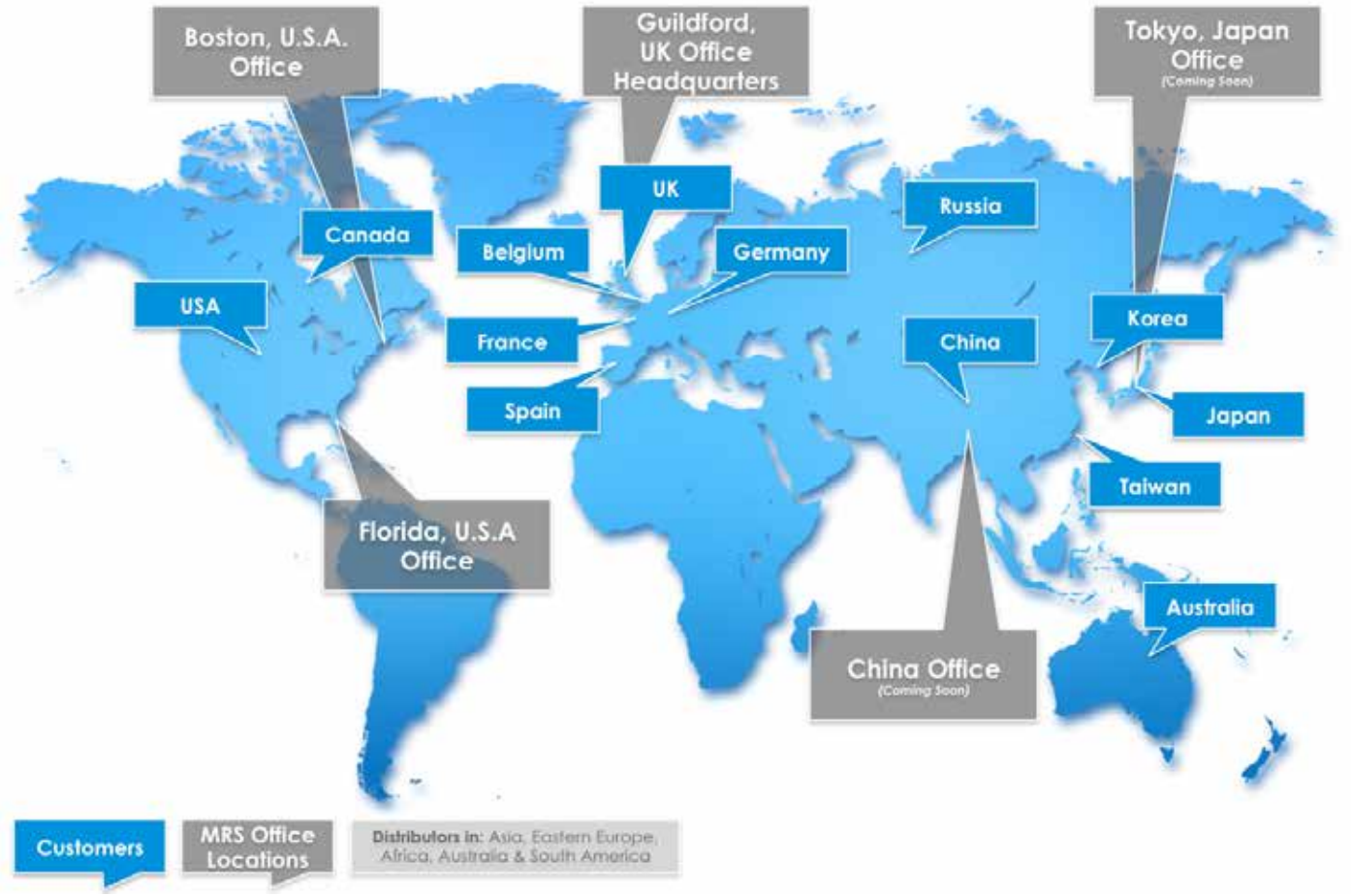


About MR SOLUTIONS

MRS is a world leader in MRI technology and the leading developer and manufacturer of the world's first range of commercial, superconducting, cryogen-free, benchtop MRI systems.

MR SOLUTIONS is a world leader in MRI technology and the leading developer and manufacturer of the world's first range of commercial, superconducting, cryogen-free, benchtop MRI systems. The MRI system's revolutionary cryogen-free magnet technology and small footprint design, enables it to operate in almost any laboratory and in close proximity to other imaging modalities.

MRS has over 30 years of MRI, application, technology hardware & software innovation experience. MRS has a global footprint with offices and customers around the world; with more than a 1000 installations, including complete imaging systems and MRI Spectrometers.



Our Products

Preclinical MRI	Preclinical SPECT & PET for MRI	Spectrometers	Optical Imaging
			

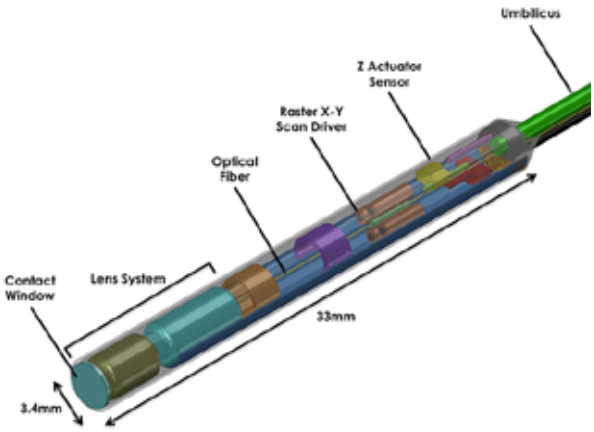
Confocal Microscopy

In vivo optical imaging – **MRS CellLIVE™** System

The MRS CellLIVE is a powerful, handheld fluorescence confocal endomicroscope imaging system designed specifically for *in vivo* research of a variety of animal models in a broad range of studies and investigations.

This miniaturised confocal microscope technology enables a diverse range of research applications and produces exquisite, high resolution *in vivo* images with fluorescent contrast agents and molecular markers.

The MRS CellLIVE system delivers sub-micron resolution and image clarity unsurpassed in a probe that measures less than 3.5mm in diameter. The image quality will amaze.



Features & Benefits

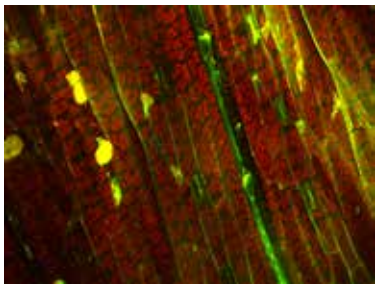
- **True 3D** *in vivo* confocal imaging
- **1080p** High resolution sub-micron images
- **Complete animal handling solution**
- Comprehensive **software suite**
- Suitable for ***in vivo*** and ***ex vivo*** studies
- **Sub-micron, sub-cellular** detail
- **Real time functional** imaging
- An easy to use **handheld endomicroscope**
- High resolution ***in vivo* microscopy**
- **Powerful Image Analysis Software**

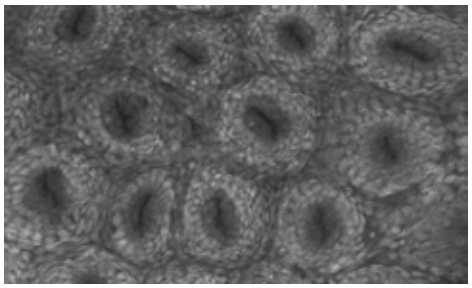
Wavelength:	488.0 nm (Blue)
Laser:	<1mW at the sample
Filter Wheel:	8 position - standard 12 position - on request
Scanner dimensions:	3mm x 30mm
Scan Area:	500 x 500 µm *(Scan mode dependent)*
Scan Depth:	0 - 250 µm (Dynamically variable)
Resolutions:	< 0.5 µm x-y; <4.5 µm z
Z-step: ***(Slice Thickness)***	3 µm; precision 1 µm
Acquisitions:	Single Frames Time Series Z-Stacks
Processor Dimensions:	410mm x 150mm x 420mm x 13kg

Preclinical Applications

MRS CellLIVE enables researchers to study and quantify *in vivo* observations of biological processes at cellular and sub-cellular levels. MRS CellLIVE can be used in a wide variety of applications, example applications include:

- Arthroscopy and cartilage
- Cell tracking
- Thrombosis formation
- Tumor angiogenesis
- Neurobiology
- Biodistribution studies
- Immunology
- Inflammation





PET-MR

Simultaneous & sequential acquisition of PET & MR – **MRS-PET™**

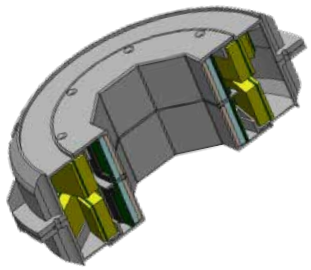
The new MRS-PET for small animal imaging offers a major breakthrough in high performance functional imaging technology. Our revolutionary MRS-PET preclinical PET/MR system provides superior soft tissue contrast and molecular imaging capability.

MRS-PET, coupled with the MRS cryogen free MRI system, is the first totally modular commercial preclinical system for simultaneous multi-modality imaging.

Researchers have the choice of:

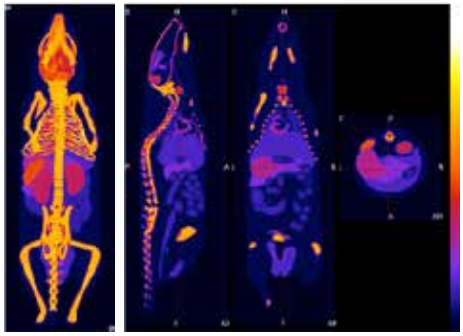
- **Independent use** of their MRI system.
- **PET imaging** using the MRS-PET as a **stand alone** device on a bench.
- **Simultaneous acquisition of PET and MRI data** by inserting the MRS-PET inside the MRI magnet.
- **Sequential PET/MR imaging** by clipping the MRS-PET on, in front of the bore of the MRS-MRI. *Animal translates automatically from one modality to the other on the same axis.*
- Operate **the PET and the MRI systems simultaneously** on a side by side configuration. This capability increases the workflow of the laboratory.

Insert	Inline	Stand alone
Simultaneous PET/MR Acquisition	**Sequential PET/MR** Acquisition *(same axis)*	**Independent PET + MR** Acquisition *(on the bench)*



The MRS-PET implements the latest technology in Silicon Photomultipliers (SiPM). These SiPM have performance characteristics similar to a conventional PMT, while benefiting from the practical advantages of solid-state technology:

- **low operating voltage**
- **robustness**
- **compactness**
- **high-temperature stability**
- **light over-exposure**



200mm rat scanned with 5 bed positions

(Simulated scan)

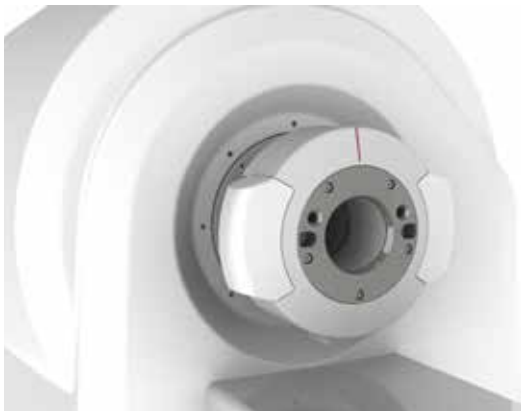
Features & Benefits

- **Standalone PET** operation possible
- **Compact and light**
- **Portable** assembly with easy clip-on/clip-off
- **Superior soft tissue contrast** and molecular imaging capability for great visualization, quantification and translational studies
- Enables **multi-modality imaging**
- The MRS-PET can accessorise all the preclinical **MRS-MRI systems up to 7T**

Specifications:	
Resolution:	**3DOSEM:** <0.9mm
DOI:	**Depth of interaction:** Dual-layer LYSO matrix with 1/2 pixel offset between lower and upper layer
AFOV:	**Effective axial field-of-view**: • 47mm - 1 Ring • 98mm - 2 Rings • 150mm - 3 Rings AFOV is extendible by automated movement of the translation stage
TFOV:	**Effective reconstructed trans-axial field of view:** 70 mm *(Bigger size available on request)*

SPECT-MR

Simultaneous & sequential acquisition of SPECT & MR – **MRS-SPECT™**



The new MRS-SPECT for small animal imaging is **based on multi-pinhole technology,** allowing high resolution and high sensitivity.

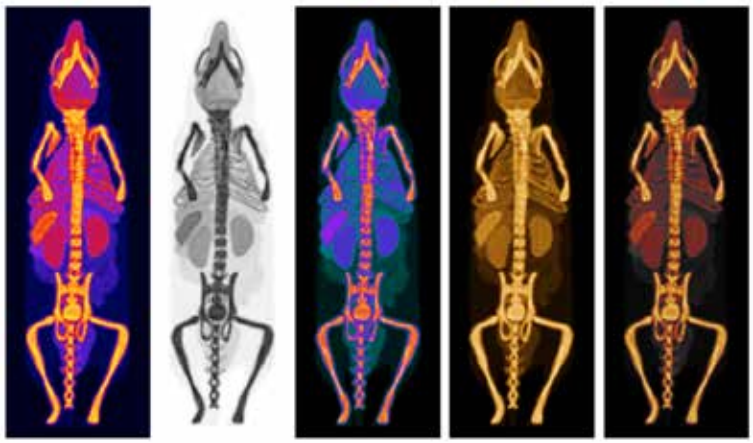
As for the PET, the MRS-SPECT coupled with MRS cryogen free MRI system is the first preclinical modular system that dramatically increases the workflow in research laboratories.

For the first time, and without buying multiple systems, researchers have the choice between different imaging system configurations:

- **SPECT imaging** using the MRS-SPECT as a **stand alone** device on a bench
- **MRI imaging** using the MRI as a **stand alone** device
- **Sequential imaging SPECT-MR** by clipping the SPECT module on, in front of the MRI system. Animal translates automatically from one modality to the other on the same axis.
- **Simultaneous acquisition of SPECT and MRI** by inserting MRS-SPECT inside the MRI magnet.
- **Simultaneous use of the SPECT and the MRI systems** when operating side by side. This capability increases the workflow of the laboratory when the 2 modalities are working at the same time.

The MRS-SPECT is available in different configurations with different transaxial field of views, allowing imaging from mice to rats.

MOBY mouse phantom images



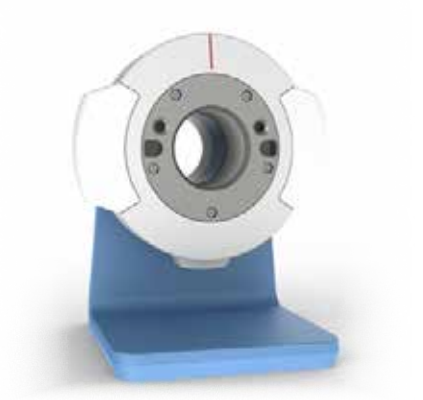
Stationary whole body scan, Axial scan range = 100mm with 8 bed positions

Features & Benefits

- **Multi-modality**, mouse, whole body imaging
- **Easy expansion** - Digital system allows for easy expansion, maintenance and upgradeability
- **Easy fit to MR SOLUTIONS MRI**
- **Co-registered with MRI -** SPECT images can be registered and fused with MR images, allowing for combined anatomical to functional data
- **Portable** assembly for easy roll up and roll away convenience
- **Multi-modality imaging**

(Simulated scan)

Specifications:	
Resolution:	**3DOSEM:** <0.8mm
	• No Gantry rotation • Up to 100 pinholes • Exchangeable collimators
AFOV:	**Effective axial field-of-view**: 14 mm **Extended Axial FOV:** 100 mm
TFOV:	**Effective reconstructed trans-axial field of view:** 70 mm



Information and specifications are subject to change without notice

MRS MRI - Variable MRI 0.1T - 7.0T

Translational preclinical MRI – **MRS™**

Our revolutionary MRS preclinical MRI systems are leading edge, cost-effective translational preclinical MRI instruments. The MRS systems provides superior soft tissue contrast and molecular imaging capability. MRS systems has superior field homogeneity with minimal noise and no temperature drift.

It is cryogen-free superconducting magnets with almost no fringe field, for safe use in any facility or existing laboratory and by any operator. Our MRI systems require **NO LIQUID HELIUM, dry magnets**.

The MRS series MRI systems are designed to compliment and enable multi-modality imaging. Delivering powerful performance and ease-of-use. The systems are compact with a small footprint design.

MR Solutions offers a range of different field strength MRI systems, with different bore sizes that can fit your lab and your research.

MRS Series MRI Systems

MRS 3000™ Series		
MRS 3017™	0T - 3.0T *(rampable)*	17cm Bore
MRS 3031™	0T - 3.0T *(rampable)*	31cm Bore
MRS 4000™ Series		
MRS 4717™	0T - 4.7T *(rampable)*	17cm Bore
MRS 7000™ Series		
MRS 7017™	0T - 7.0T *(rampable)*	17cm Bore
MRS 7024™	0T - 7.0T *(rampable)*	24cm Bore

Features & Benefits

Superconducting Magnet	• High performance • High homogeneity • High Stability • Almost no fringe field
Cryogen Free Magnet	• No need for liquid Helium • No quench provision required • Dry magnet
Compact & Light	• Small footprint • <220Kg for 3T • <350Kg for 7T
Multi-modality Imaging	• PET modules & inserts • SPECT modules & inserts • Allows side-by-side installation with other modalities
No Special Room Requirements	• No need for quench pipes • No Faraday cage • No special floor needed
Variable Field Strengths	• From 0.1T to 7.0T • Systems can operate at variable strengths

Cryogen Free Preclinical MRI

Complete animal handling solution

MR SOLUTIONS provides industry standard accessories with the latest generation of animal beds for mice, rats and rabbits. An important part of preclinical *in vivo* imaging is the ability to image the same animal repeatedly over time, using different imaging modalities. To ensure a streamlined workflow and ease-of-use, the animal beds are multi-modality ready and can be installed and used on almost every system on the market.

Features:

- Bed graduated along axis to ensure positioning reproducibility
- Tooth bar to immobilize the animal
- Warm air heating using closed cycle system
- Provision for gas anaesthesia
- Provision for physiological monitoring and cardiac/respiratory gating
- Integrated stereotactic holder

Multi-modality imaging

MR SOLUTIONS MRS MRI systems have a very small footprint and a highly compact design, including a very small 5 gauss line.

This enables the MRS MRI systems to be installed in the same room and side-by-side to nuclear preclinical imaging equipment and other preclinical imaging systems making multi-modality imaging with MRI easy.

EVO Spectrometers

Our range of EVO spectrometers incorporates the latest digital technology and is acknowledged to have the widest range of features and capabilities of any spectrometer.

These spectrometers can be fitted as an upgrade to any existing MRI scanner to increase its capabilities and are widely used by OEMs.

Features:

- Unlimited number of TX and RX channels
- Operation to 11.7T
- Full phased array support
- Extensive sequence library
- Choice of user interfaces
- Comprehensive development software

Specifications – MRS MRI systems

	MRS 3017	MRS 3031	MRS 4717
Animal Models:	Mice, rats and marmosets	Mice, rats, rabbits, and NHP (to 3kg)	Mice, rats and marmosets
Site Requirements:	Plug and Play System - No special room construction		
Features:	• Multi-modality workspaces • Side-by-side installation with PET, SPECT, CT, Optical and other modalities • Multi-modal interchangeable beds • Ideal for class 3 & 4 laboratories		
Magnet			
Field Strength:	**0T - 3.0T** *(rampable)*	**0T - 3.0T** *(rampable)*	**0T - 4.7T** *(rampable)*
Magnet:	Cryogen-free, Superconducting magnet		
Bore size:	17cm	31cm	17cm
Integrated RF Shield:	Yes	Yes	Yes
5 Gauss line: *(From magnet center)*	60cm radially x 80cm axially	85cm radially x 143cm axially	75cm radially x 125cm axially
F.O.V:	Elliptical: 100mm x 70mm	Elliptical: 138mm x 150mm	Elliptical: 100mm x 70mm
Homogeneity:	Over 30mm +/- 0.1ppm, Over 70mm DSV +/- 1ppm	Over 80mm DSV +/- 0.1ppm, Over 135mm DSV +/- 1ppm	Over 30mm +/- 0.1ppm, Over 70mm DSV +/- 1ppm
Magnet Weight:	220kg	<400kg	<350kg
Dimensions: *(Including stand)*	88cm Long x 77cm Wide x 138cm High	100cm Long x 85cm Wide x 142cm High	88cm Long x 80cm Wide x 141cm High
Gradient System			
Gradient diameter:	156/100mm	305/205mm	156/100mm
Strength:	X - 486 mT/m Y - 470 mT/m Z - 530 mT/m	X - 200 mT/m Y - 200 mT/m Z - 200 mT/m	X - 486 mT/m Y - 470 mT/m Z - 530 mT/m
Rise time @100A, 150V:	100 microseconds	500 microseconds	100 microseconds
Linearity:	Over 70mm: +/- 5%	Over 120mm: +/- 5%	Over 70mm: +/- 5%
Max duty cycle:	50%	50%	50%
RF Coils			
Mouse Volume (body)	38mm ID Quadrature birdcage		
Mouse Head	20mm ID Quadrature birdcage		
Rat body	65mm ID Quadrature birdcage		
Rat head	42mm ID Quadrature birdcage		
X nuclei	Yes		
Large Animal	No	Yes	No
Electronics			
EVO Spectrometer:	2TX, 4RX - Optional RX channels in blocks of 4		
RF Transmit Amplifier Power:	500W	1000W	1000W
Pre-amplifiers x2, gain:	30dB		
Pre-amps x2 Noise Figure:	< 0.3dB		
Gradient Amplifiers:	X, Y, Z		
Shim Power Supplies:	B0 plus 5 channels for second order		
Cabinet Size & Weight:	158cm High x 78cm Deep x 55cm Wide x 150Kg		
Requirements			
Electrical-Compressor:	380V/50Hz or 480V/60Hz 3phase, 7.5kW		
Electrical-Electronics Rack:	208-240V 50/60Hz single phase, 6.5kW peak, <3.0kW rms		
Water Supply:	7 litres/min. minimum		

Specifications – MRS MRI systems

	MRS 7017	MRS 7024
Animal Models:	Mice, rats and marmosets	Mice, rats and rabbits
Site Requirements:	Plug and Play System - No special room construction	
Features:	• Multi-modality workspaces • Side-by-side installation with PET, SPECT, CT, Optical and other modalities • Multi-modal interchangeable beds • Ideal for class 3 & 4 laboratories	
Magnet		
Field Strength:	**0T - 7.0T** *(rampable)*	**0T - 7.0T** *(rampable)*
Magnet:	Cryogen-free, Superconducting magnet	
Bore size:	17cm	24cm
Integrated RF Shield:	Yes	Yes
5 Gauss line: *(From magnet center)*	85cm radially x 155cm axially	120cm radially x 219cm axiall
F.O.V:	Elliptical: 100mm x 70mm	Elliptical: 154mm x 98mm
Homogeneity:	Over 30mm +/- 0.1ppm, Over 60mm DSV +/- 1ppm	Over 42mm DSV +/- 0.1ppm, Over 84mm DSV +/- 1ppm
Magnet Weight:	<500kg	<600kg
Dimensions: *(Including stand)*	88cm Long x 82cm Wide x 138cm High	90cm Long x 85cm Wide x 140cm High
Gradient System		
Gradient diameter:	158/100mm	
Strength:	X - 486 mT/m Y - 470 mT/m Z - 530 mT/m	X - 344 mT/m Y - 332 mT/m Z - 375 mT/m
Rise time @100A, 150V:	100 microseconds	100 microseconds
Linearity:	Over 70mm: +/- 5%	Over 70mm: +/- 5%
Max duty cycle:	50%	50%
RF Coils		
Mouse Volume (body)	38mm ID Quadrature birdcage	
Mouse Head	20mm ID Quadrature birdcage	
Rat body	65mm ID Quadrature birdcage	
Rat head	42mm ID Quadrature birdcage	
X nuclei	Yes	
Large Animal	No	Yes
Electronics		
EVO Spectrometer:	2TX, 4RX - Optional RX channels in blocks of 4	
RF Transmit Amplifier Power:	1000W	1000W
Pre-amplifiers x2, gain:	30dB	
Pre-amps x2 Noise Figure:	< 0.3dB	
Gradient Amplifiers:	X, Y, Z	
Shim Power Supplies:	B0 plus 5 channels for second order	
Cabinet Size & Weight:	158cm High x 78cm Deep x 55cm Wide x 150Kg	
Requirements		
Electrical-Compressor:	380V/50Hz or 480V/60Hz 3phase, 7.5kW	
Electrical-Electronics Rack:	208-240V 50/60Hz single phase, 6.5kW peak, <3.0kW rms	
Water Supply:	7 litres/min. minimum	

Software

Software for all user levels

Our software packages offer a complete workflow solution that enables users to easily acquire images, quantify, analyze and export data and images.

The software offering is a comprehensive three-part package, giving the user flexibility in choosing the right software that most suit their needs.

The packages are designed to be highly compatible and will interface together, allowing managed user protocols and sequence transfer with fast automatic system optimization. Data is powerfully gathered and evaluated to maintain a high level of user efficiency, enabling efficient productivity levels.

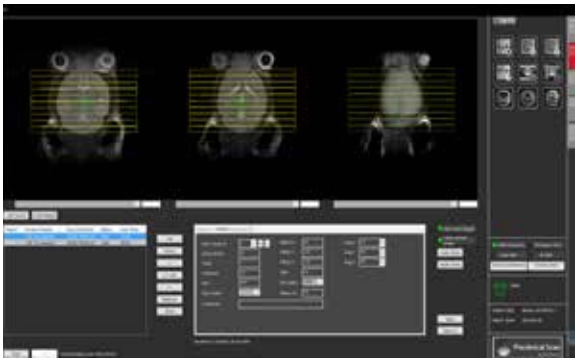
The software is designed to be friendly and easy to set up, even for the new user. For the advanced user, real time optimisation and change is possible under experimental process whilst still delivering high-resolution imaging.

Preclinical Scan™ - Optimum Functionality

Preclinical Scan is the preclinical equivalent of a fully featured clinical user interface. The user is able to vary many imaging parameters within each MRI pulse sequence. To permit this, a key feature of this interface is the validation for viability/safety of all combinations of sequence parameters selected.

The package allows for user access management, enabling management to define levels of access.

Key Features



- Modern, user friendly interface for ease of operation
- User defined examination protocols with auto run options
- Queued execution:
  Scan > Reconstruction > Display
- Filming
- Sequence parameter validation
- Image stitching
- Multi-modality image fusion
- Configurable sequence parameter protocols
- Enables user defined variable parameters per sequence
- Scan time calculation
- MR SOLUTIONS dial-in and help calibrate/adjust sequence settings to optimize the operation in real-time
- Management can change system settings, add new sequences and modify default sequence parameters
- Export to DICOM

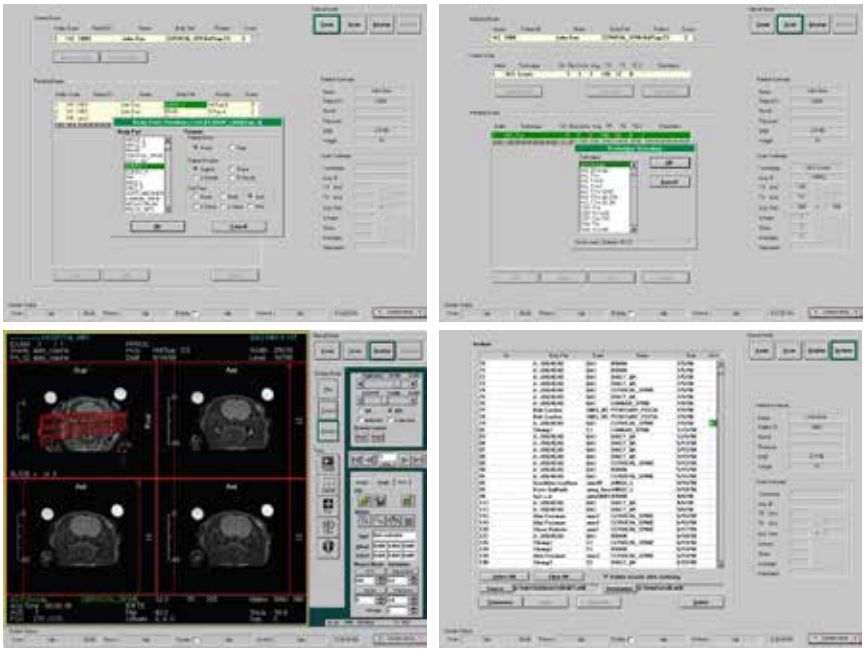
EasyScan™ - Routine Applications – For simplicity of use

This package is for the non-specialist user. This enables users without an MRI background to set up and run predefined (by the system administrator) protocols. The software includes auto calibrate and auto shim functions as standard for simplicity of operation.

In essence, this package allows the "non-skilled" user to carry out routine imaging.

Key Features

- Queued execution:
  Scan > Reconstruction > Display
- User defined examination protocols with auto run options
- Auto system calibration routines
- Lock down feature
- Patient management
- DICOM Export
- User customisable text with international language display
- Sequences developed under 'Powerscan' readily incorporated into 'Easyscan'



PowerScan™ - The Research User – For ultimate flexibility

The package offers ultimate flexibility and is effectively the interface and engine for both clinical and preclinical systems. The Powerscan software package permits access to all functions of the system for experienced users. It enables the writing of pulse sequences.

Powerscan allows the MRI physicist full access to all functions of the MRI system. Pulse sequences may be written and/or modified and new reconstruction algorithms incorporated. Full source code to all pulse sequences is supplied.

Key Features

- Full control of the system
- Access to individual components such as RECON
- Interface to user programs
- Flexible pulse programming environment with user defined graphical wave shape generation
- Interactive setup mode for sequence parameter optimization including real-time display of images and/or spectra and time data
- Scripting of own set of modes of acquisition
- Customizable reconstruction processing
- DICOM export
- DICOM worklist
- User customizable text with international language display

Pulse Sequences

Extensive and complete sequences library

Spin Echo Based Sequences
2D Spin Echo Sequence
T1, T2 weighted
Flow compensation
Single- and multi-angle oblique
Pre-saturation bands
MTC pulse option
Inversion Recovery sequence
Diffusion Weighted sequence
3 point DIXON method sequence

MR Angiography
2D Time of Flight Sequence
Flow compensation
Travelling pre-saturation bands
MTC pulse option
3D Time of Flight Sequence
Flow compensation
MOTSA option
Travelling pre-saturated bands
MTC pulse option
Phase Contrast gradient echo based sequence

EPI Sequences
EPI Gradient Echo based sequence
EPI Spin Echo based sequence
Multishot EPI sequence
Diffusion Weighted EPI sequence
Diffusion Tensor Imaging EPI sequence
EPI Gradient Echo based sequence

Gradient Echo Based Sequences
2D Gradient Echo Sequence
In-and opposed phase
Flow compensation
Spoiled
Fully rewound
T2, T2*weighted
T2* mapping
3D Gradient Echo Sequence
In-and opposed phase
Flow compensation
Pre-saturated bands
MTC pulse option
Spoiled
Fully rewound
T2, T2*weighted

Data Processing
Acquisition Modalities
Single RX
Phased Array/Multiple RX
Reconstruction
2D FFT
3D FFT
Phased array
Single voxel spectroscopy
Enhanced Adaptive Filtering (optional)
SENSE
Image stitching
T1 & T2 maps

Fast Sequences
Fast Spin Echo sequence
T1, T2 weighted
Flow compensation
Partial k-space option
Single-shot Fast Spin Echo sequence
Fast Spin Echo 3D sequence
T1, T2 weighted
Flow compensation
Fast Inversion Recovery sequence
Fast Dual Spin Echo sequence
Multi-Echo-Multi-Slice sequence

IVS Sequences
STEAM spectroscopy sequence
Point resolved spectroscopy sequence
Chemical Shift Imaging sequence
Fat/Water suppression sequence
ISIS sequence with OVS
ISIS setup sequence – for 180°pulses
GE- FID
EPSI
EPSI - FLYBACK

Bulk Spectroscopy Sequences
CPMG sequence
Inversion Recovery sequence
Saturation Recovery sequence

Packages

Application packages included

MR SOLUTIONS do not charge extra for application packages; all packages are included as a standard feature with all preclinical MRI systems:

- Diffusion Package
- Angiography Package
- fMRI and DCE Package
- Short Echo Time Package
- Relaxation Package
- Spectroscopy Package
- Additional packages are available on demand

Site Planning & Installation

Typical installation

Unlike bulky preclinical MRI systems that use liquid Helium, also called "WET" magnets, preclinical MRI systems from MR SOLUTIONS (dry magnet) do not require any special room/facility construction.
MRS Preclinical MRI systems do not have any particular requirements for the height of the room, since the dimensions of the system including the cover, are: 138cm high x 88cm deep x 82cm wide for the 7T MRS, the 3T is even smaller.

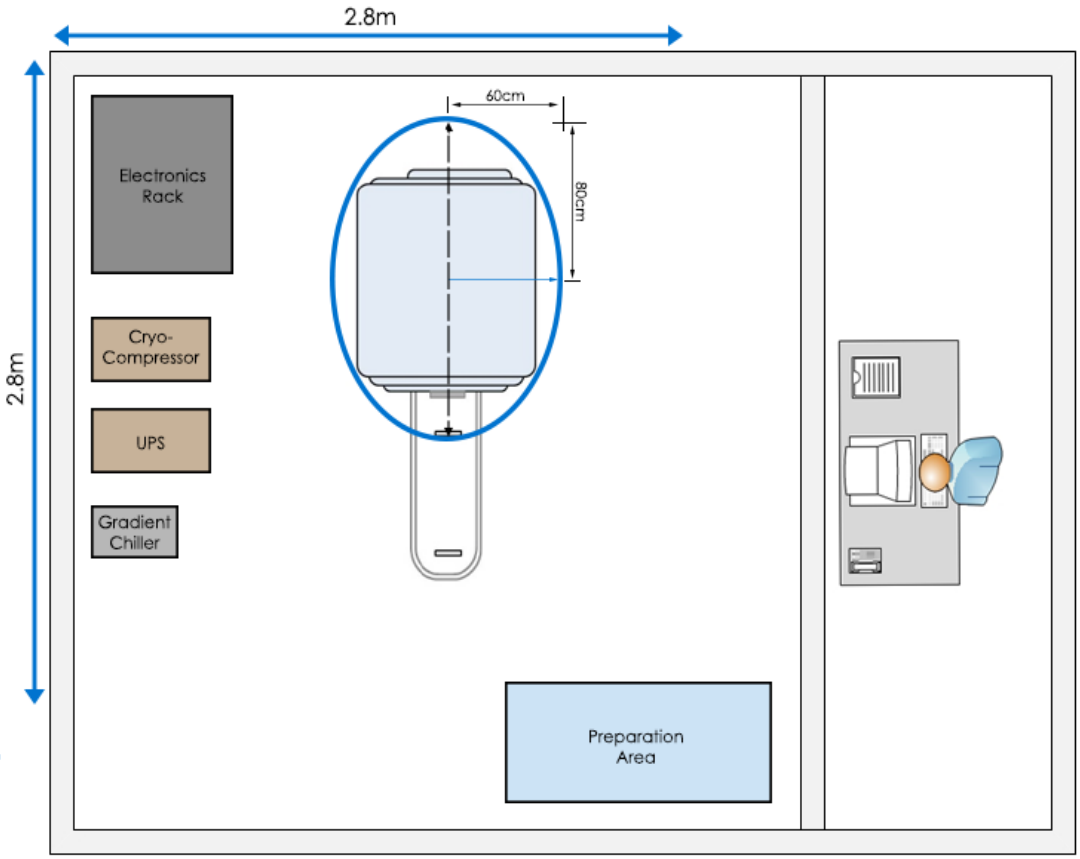
- The systems do not use liquid Helium to cool down the magnet, which means **no quench lines** are required.
- The **weight** of the 7T magnet is <350kg (3T under <220kg) - almost 4 times less than a wet magnet, therefore it doesn't require floor reinforcements.
- **Minimum room dimensions** are 8m² to be comfortable, but can be installed in 4m² room.
- MR SOLUTIONS' systems are **SELF-SHIELDED**, no need for a Faraday cage.
- **No** need for 350L of **liquid Helium.**

✔ No need for reinforced concrete floor

✔ No need for a Faraday cage

✔ No liquid Helium

✔ No special height requirement for the room

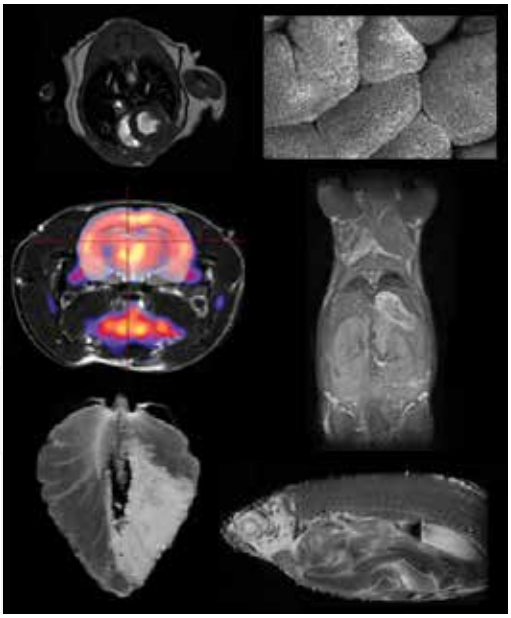


Applications

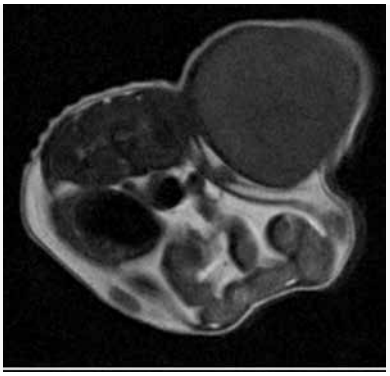
Preclinical Research and More

Our unique cryogen-free, benchtop MRI systems enable a broad range of applications, from preclinical imaging to food, industrial and commercial applications.

Preclinical Imaging	• Neurology Research • Cardiovascular Research • Cancer Research & Oncology • Developmental Biology • Full Body Imaging • Anatomical Imaging • Angiography • Spectroscopy
Multi-modal Imaging	• Side-by-side installation with PET, SPECT, CT, Optical and other modalities
MRI Physics	• Imaging technology and pulse sequences development
Materials Imaging	• MRI porous media imaging • Food products • Porous media • Plastics • Soft Solids

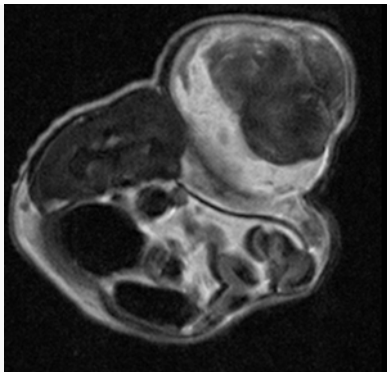


Mouse Subcutaneous Tumor



FSET1w (1)

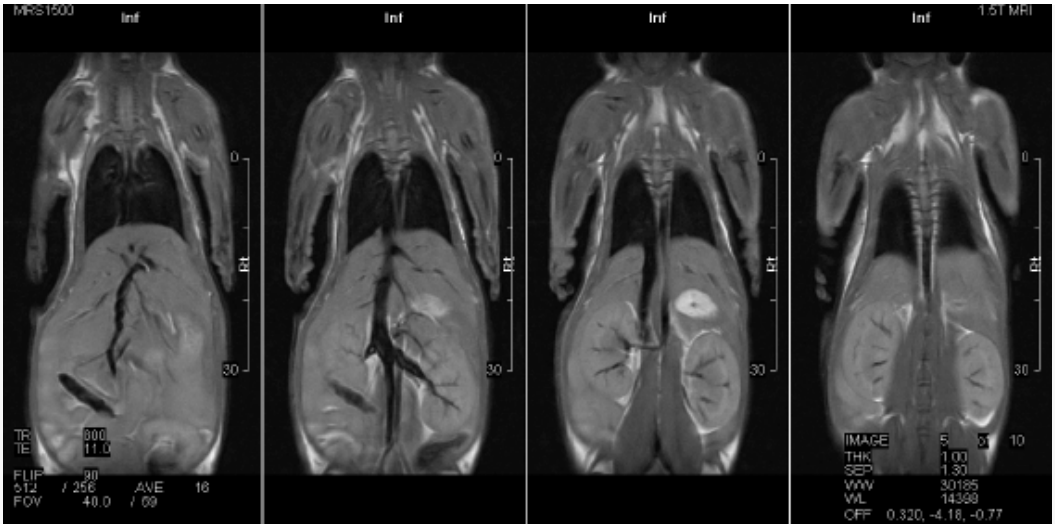
FOV: 40x40
Fr x Ph: 256x252
Acq. time: 3:07min



FSET2w (2)

FOV: 40x40
Fr x Ph: 258x252
Acq. time: 3:23min

Mouse Whole Body

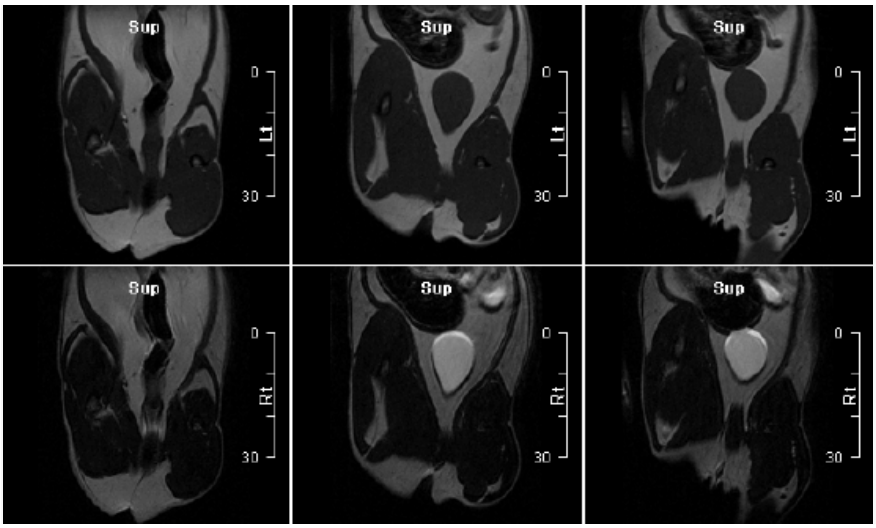


FSET1w

With respiratory gating

1.5T

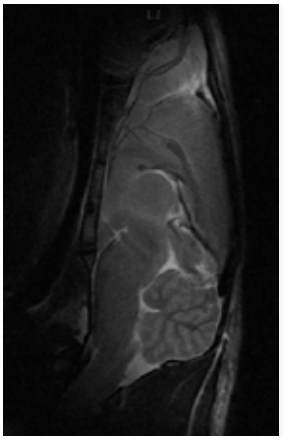
Rat Body



SE T1W and T2W

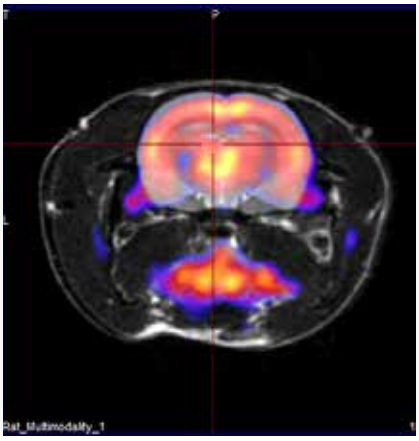
Orientation: Coronal
Slice thickness: 1.5mm / 24 slices
Gating: respiration
TR 720ms / TE 11ms (T1),
TR 5s /TE 68ms (T2)
FOV 40x40
Fr x Ph 256x240

Rat Brain



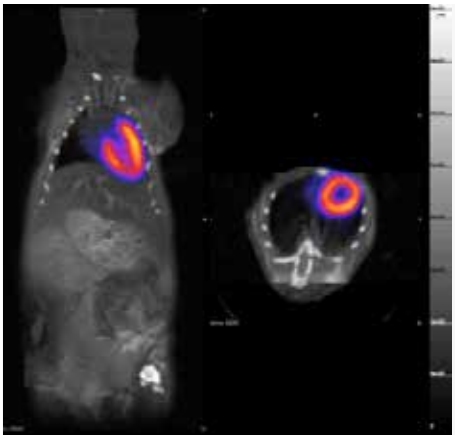
FSET2w

Resolution:
78um x 80um x 750um

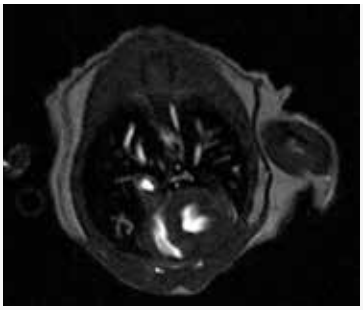


FSET2W
Orientation: Axial
Slice thickness: 1mm / 18 slices
TR: 3000ms / TE: 68ms
FOV: 35x35 / FrxPh: 256x248 / Averages: 4
Acq. Time: 6:16min

Mouse Cardiac

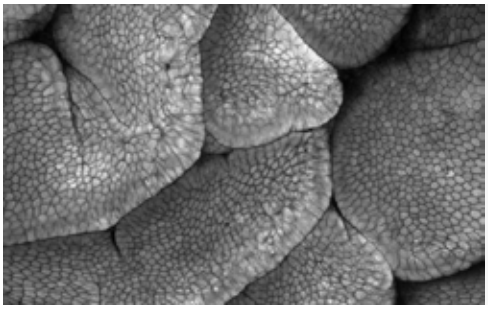


FSE T1W
Coronal
RESP Gating
Echo Time: 11
Repetition Time: 720
Acquisition time: 12'16"
Slices: 8,
Slice Thickness: 1.5
Averages: 8
FOV: 70X70

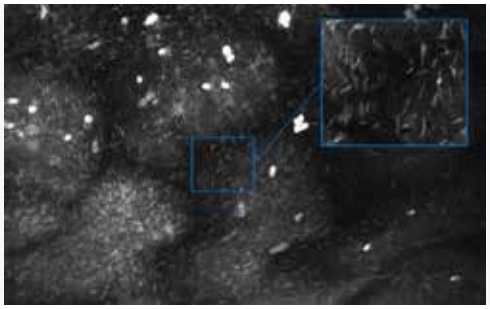


Cardiac and Respiratory gating

In vivo Confocal Microscope - CellLIVE



Gastric Mucosa



Dog Stomach Bacteria

Imaging INNOVATION

Using your smartphone:
- *Download a free QR reader*
- *Open the application*
- *Point and discover more about MR SOLUTIONS*

For more information contact us at:
information@mrsolutions.com
+44 (0)1483 532146
www.mrsolutions.com

Office Locations:
MR SOLUTIONS Ltd. Ashbourne House, The Guildway, Old Portsmouth Rd. Guildford, Surrey, GU3 1LR UK

MR SOLUTIONS Inc. an MR SOLUTIONS company, 20 Main Street, STE 201A, Acton, MA 01720, USA

Gastric Mucosa Images courtesy of researchers at Univ. of Melbourne, Faculty of Veterinary Science (as part of the Melbourne node of the Victorian Biomedical Imaging Capability and the National Imaging Facility, an NCRIS funded Federal research initiative)

Rev. MRS 3.0 05-15