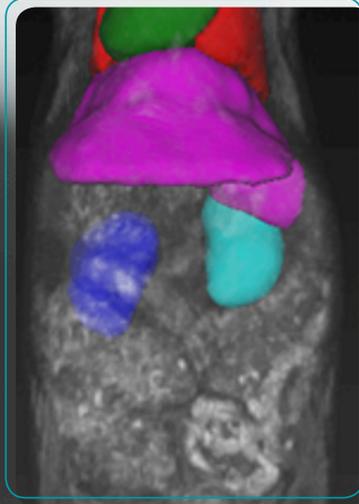




# M-Series™ Compact MRI Systems



*Simple, intuitive and  
accessible MRI solution  
for preclinical research*

one touch MRI

# Application Oriented Imaging

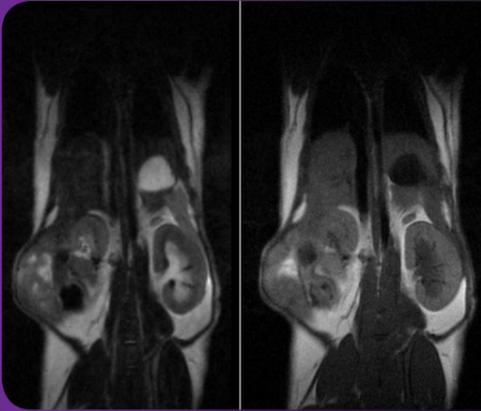
## Molecular Imaging Using Contrast Agents

Detection and quantification of cellular activity targeted and enhanced with contrast agents



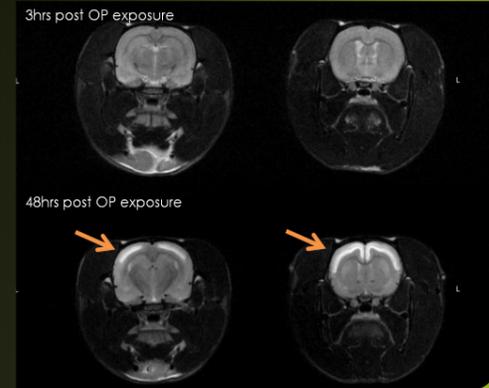
## Anatomy and Morphology

*In vivo* soft tissue imaging for morphological characterization. 2D and 3D imaging can be performed quickly and easily for preclinical model assessment.



## Neurobiology

*In vivo* anatomical imaging of the brain, spine and spinal cord for assessment and follow-up of neurologically-based diseases



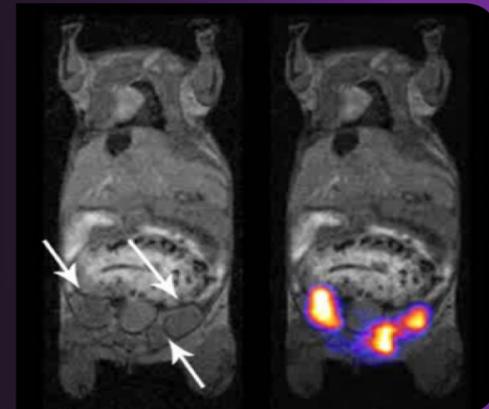
## Cancer Research

Detection, follow-up, and quantification of tumor development and progression.



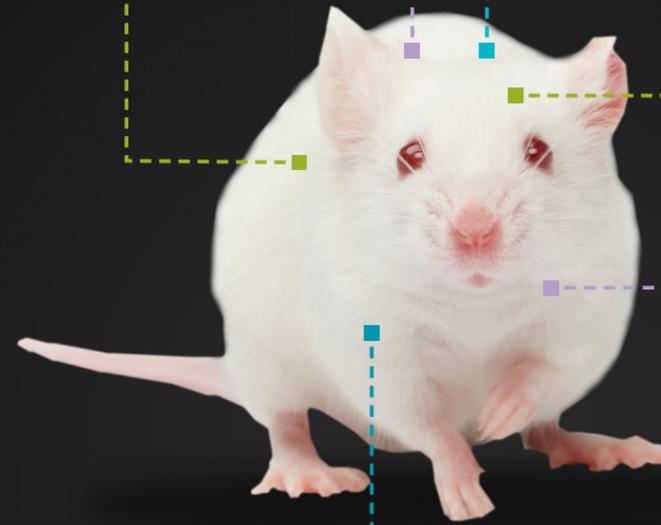
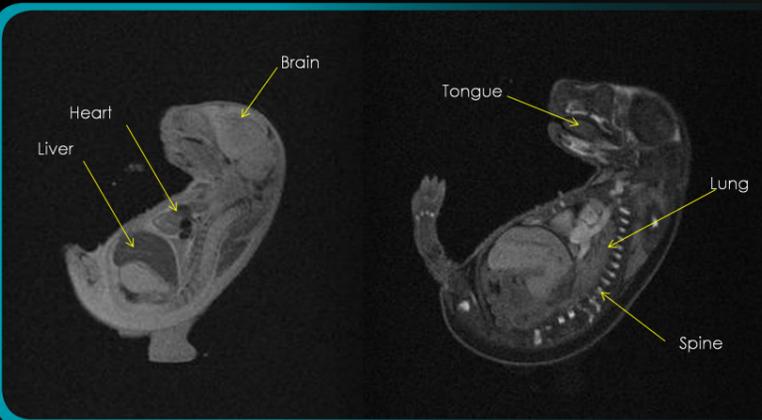
## Multi-modality Imaging

Easy registration with other modalities such as Optical, PET, SPECT and CT to enable powerful multi-modality pheno-typing.



## Ex vivo Imaging

High-resolution, high throughput, 3D MR-based histology imaging of fixed samples and embryos for toxicological and developmental studies.





# M-Series™: Compact MR Imaging

**Non-invasive 3D anatomical, functional and molecular results in mice and rats**

■ Simple to operate

Intuitive software interface and analysis tools require no prior experience in MR imaging to fully execute the workflow and imaging.

■ No additional infrastructure necessary to maintain the magnetic field

Aspect's permanent magnet technology removes the need for cryogenics, plumbing, chemicals and supplemental power supplies or coolers.

■ Pain-free installation, ready for imaging from day one

Simply wheeled into position and moved around based on the needs of the working lab, with imaging possible just a few hours after installation.

■ No running cost of upkeep

Negligible running cost with a maintenance free magnet, no moving parts or cooling. Standard warranty is 12 months with options for extended warranty for up to 5 years. Power fluctuations and outages have no impact on the permanent magnet.

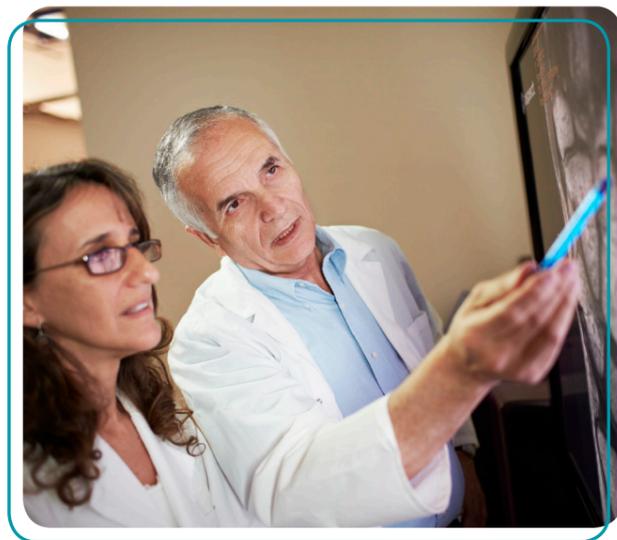
■ No dedicated housing facilities

Requires no dedicated power supply, no shielding, isolation from other metal objects or other magnetic field restrictions.

## Simplified and Optimized Preclinical Research

**Aspect Imaging is the world's leader in compact, high-performance MRI systems: Powerful results without the cost, complexity and technical burden of conventional MRI systems.**

With the M-Series™ platform, academic researchers and pharmaceutical companies can harness the power and insights of MRI, deriving quantified answers to their biological questions - quickly, easily and cost effectively.



# M3™: For Mice and Small Animal Imaging M7™: From Small Mice to Large Rats

Aspect's MRI systems offer a comprehensive preclinical solution to quantify the expression of disease, monitor disease progression and assess therapeutic efficacy and response in lab rodents.

The smaller sized M3™ makes the power of MRI systems available to the significant portion of academic researchers requiring only mice imaging. The larger-scale M7™ delivers imaging for both mice and rats.

High performance, compact, permanent magnet on a portable cart

Integrated mini electronics cabinet

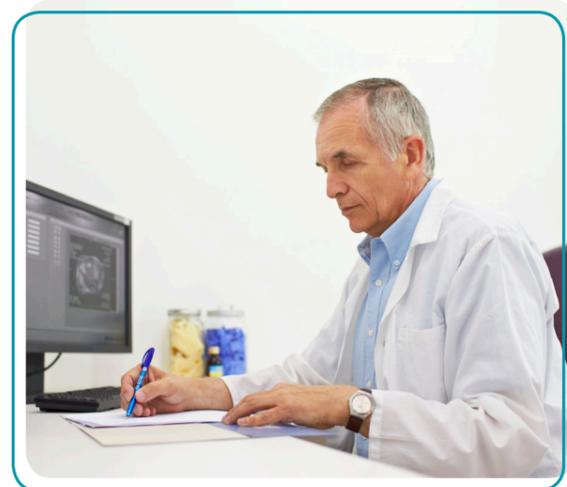
PC workstation with simple and intuitive operating software

Scalable with easy "magnet only" upgrade. Workstation, software and electronics are the same for all M-Series™ compact MRI systems

Flexibility and customization available for more advanced MRI users

A complete solution including animal handling, physiology monitoring and anesthesia delivery

Best-in-class post processing, analysis and data management solution



# M-Series™ Imaging Software Platform



Acquisition software for preclinical MR imaging, integrating a coherent suite of sequences:

Spin echo with the following options:

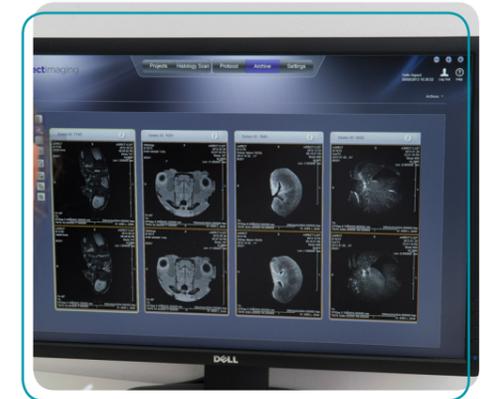
- Respiration/cardiac triggering
- Preceding inversion recovery pulse
- Diffusion weighted imaging

Gradient echo with the following options:

- 2D and 3D
- Respiration/cardiac triggering
- Dynamic acquisition – i.e. Dynamic Contrast Enhanced (DCE)
- IR Snap for T1 map generation

Fast spin echo

- 2D and 3D
- Respiration/cardiac triggering
- Variable echo train length
- Multi-point fat/water separation



Extensive post-processing tool - VivoQuant™ Image Analysis and Co-registration Software - includes:

3D ROI segmentation tools with automatic, semi-automatic and manual segmentation  
Co-registration tools to generate multi-modality MR images (automated, manual and fiducially-aided), e.g. PET/MR

Supports multiple input data formats, and multiple output formats including video loop generation

Modeling tools to generate T1, T2, and ADC maps

Co-registration capabilities with optical and PET imaging

# Optimized Animal Handling System

A full suite of application-specific RF coils and animal handling beds and accessories:

Type	Dimensions		Application
	Inner Diameter	Length	
Mouse head	23 mm	25 mm	Neurological imaging in mice
Mouse body	30 mm	50 mm	Extremity, abdominal and thoracic cavity imaging in mice
Mouse whole body	30 mm	80 mm	Whole body imaging in mice
LumiQuant - mouse body	38 mm	50 mm	Multi-modal imaging in mice Obesity studies in mice
Rat head	35 mm	40 mm	Neurological imaging in rats
Rat body	50/60 ellipsoid	90 mm	Extremity, abdominal and thoracic cavity imaging in rats
Large rat body	71 mm	90 mm	Extremity, abdominal and thoracic cavity imaging in large rats

## MR-based Histology Module

Automated multi-sample ex vivo imaging  
Accommodate long scan times (>1 hr) for high spatial resolution  
Easy to use multi-sample ID and data management system

## Multi-nuclear Capabilities

Optional imaging coils for advanced multi-nuclear imaging  
Supports imaging and detection of <sup>13</sup>C, Xe and F

## Multi-modality Capabilities

Simultaneous PET/MRI with SimPET (MR compatible PET insert from Brightonix Imaging).  
MIM (Multimodal Imaging Module) for MRI and optical co-registration  
(3D Bioluminescence by IVIS® SpectrumCT)

# Fully Integrated Animal Handling System

*Facilitating a complete setup for preclinical imaging with designated coil for different imaging applications*

Motorized calibration mechanism enabling automatic coil-tuning

Water heated animal bed maintaining hydrated body temperature

Physiological monitoring system (respiration, ECG and temperature)

Delivery and evacuation of isoflurane-based anesthesia

## Small animal physiological monitoring

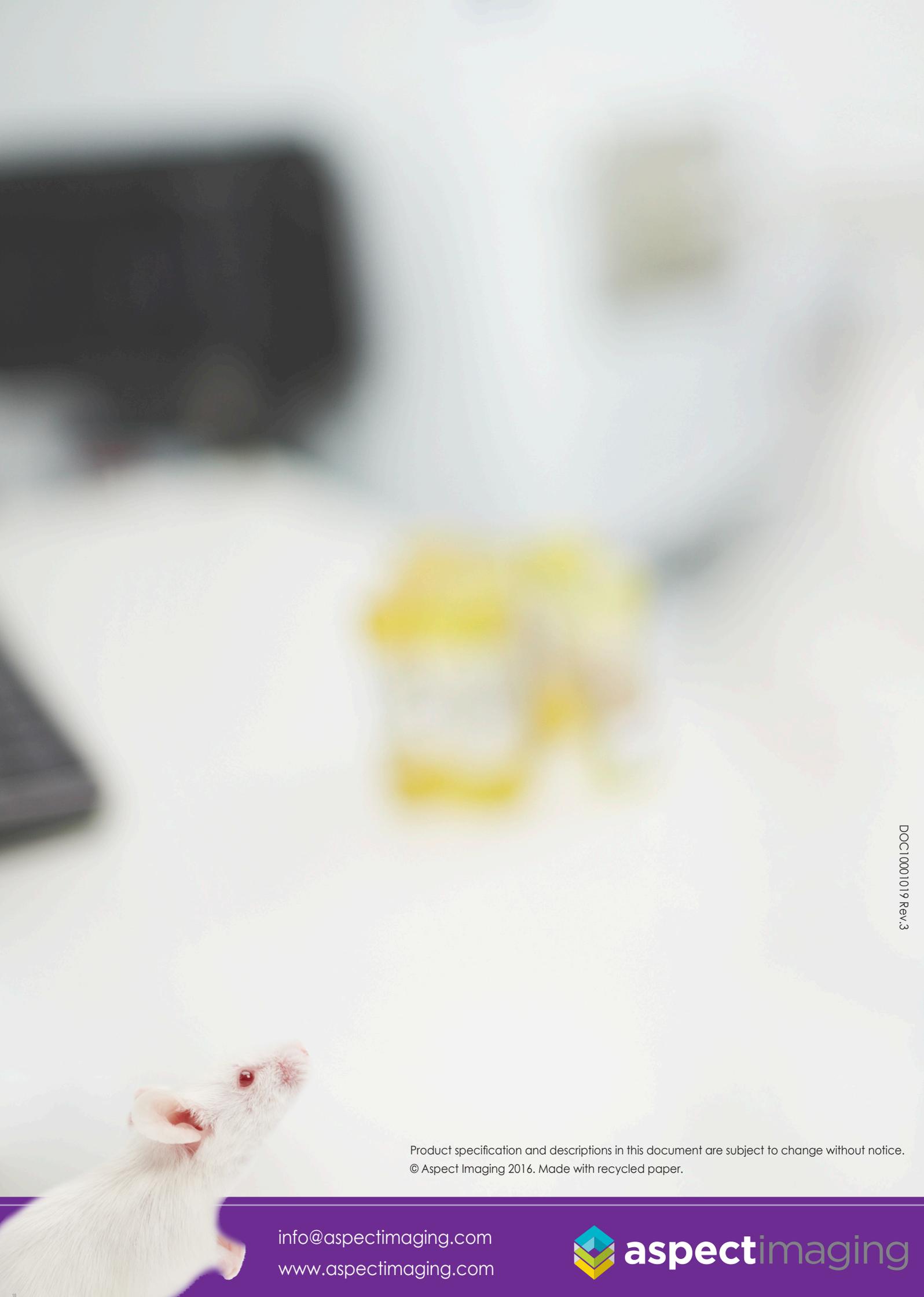
Respiration, ECG and temperature monitoring  
Respiration and ECG output triggering to MRI spectrometer  
Additional readouts monitor

## Isoflurane-based anesthesia

Vaporizer with temperature and flow-rate compensation  
Scavenging cube for waste gas  
Breathing circuit with 3 access points







Product specification and descriptions in this document are subject to change without notice.  
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