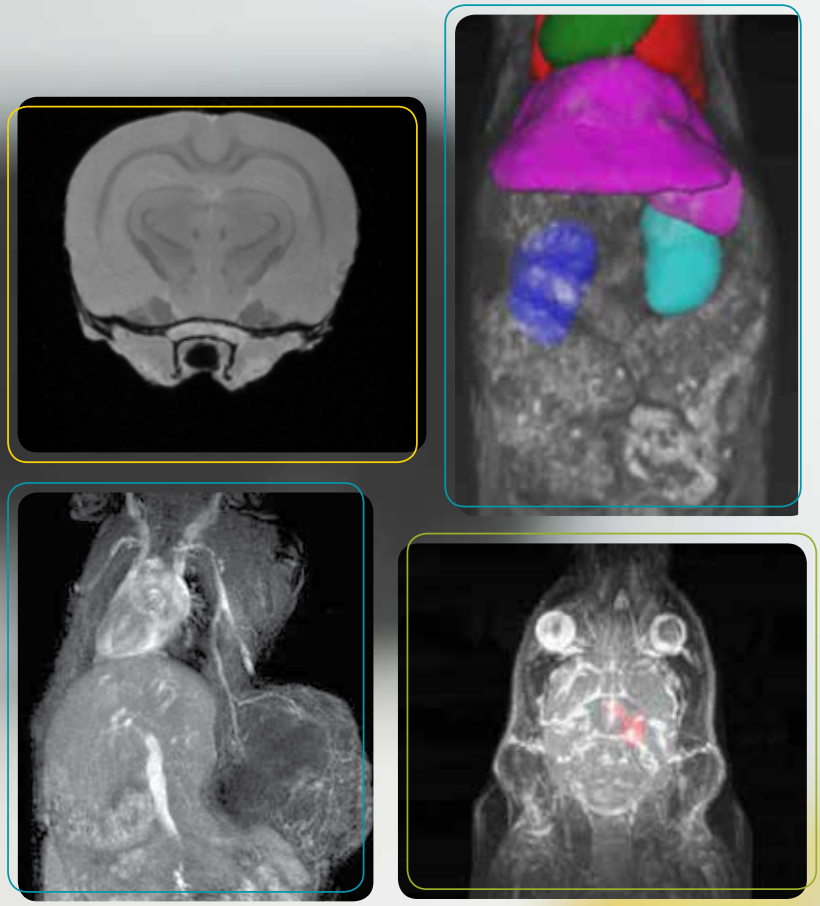


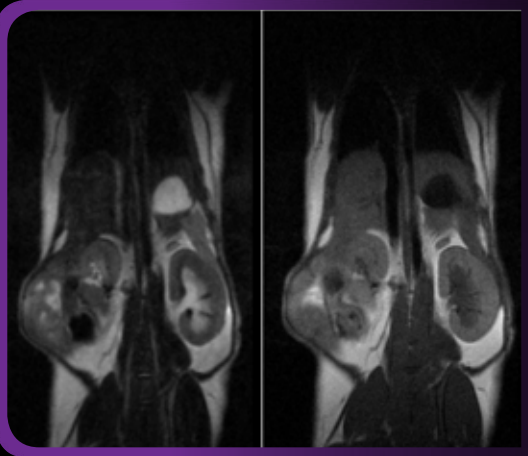
aspectimaging

# M-Series™ Compact MRI Systems


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

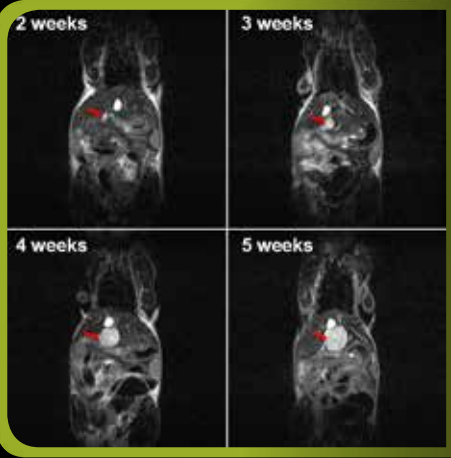
one touch MRI

# Application Oriented Imaging



## 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.




## Cancer Research

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


## *Ex vivo* Imaging

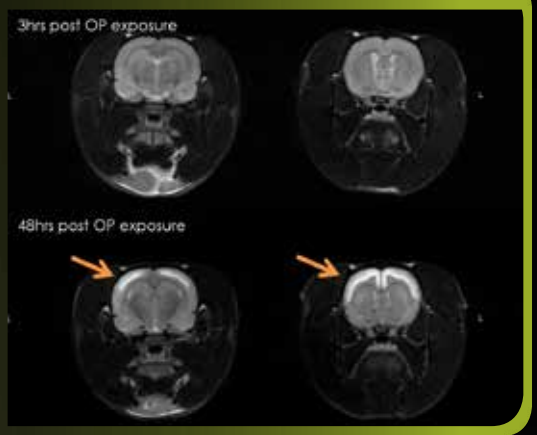
High-resolution, high throughput, 3D MR-based histology imaging of fixed samples and embryos for toxicological and developmental studies.

## Molecular Imaging Using Contrast Agents

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

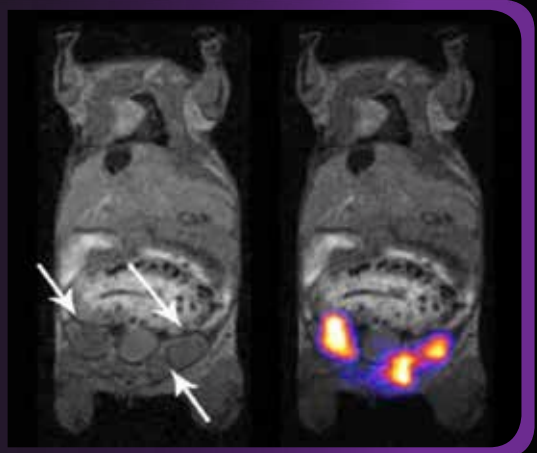

## Neurobiology

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




## Multi-modality Imaging

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



# 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.

# 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 cryogens, 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.

# 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**

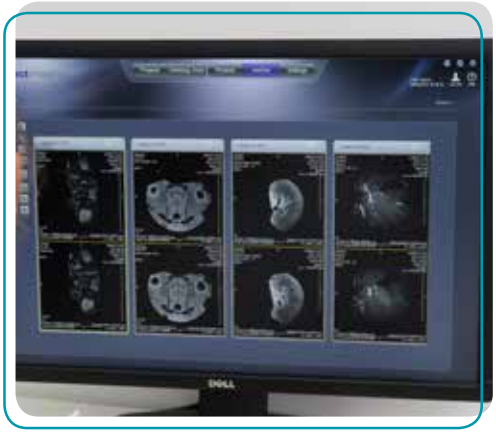
**Best-in-class post processing, analysis and data management solution**

# 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<br>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 $^{13}C$, 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

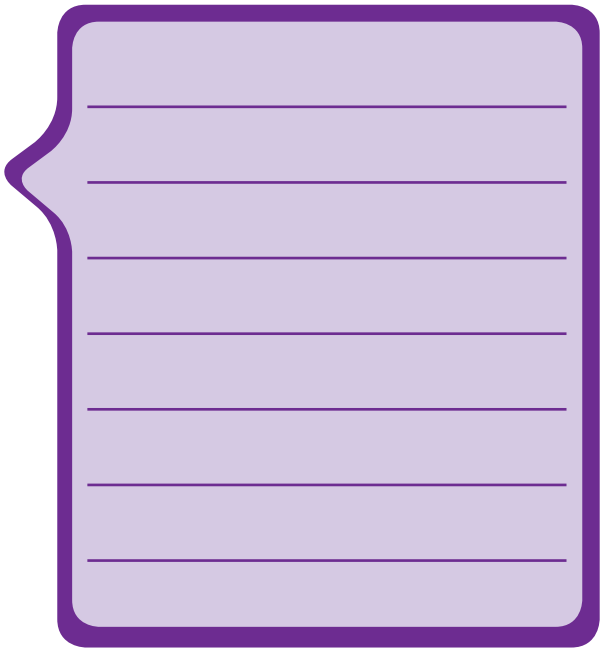
**Small animal physiological monitoring**

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

# Taking notes



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