

# Core Facility 7T Experimental MRIs

## 7T Experimental MRIs

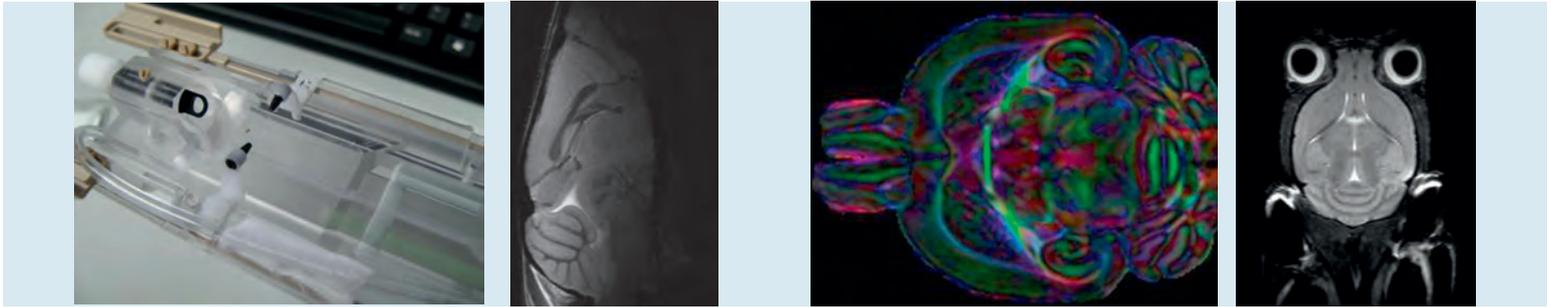
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## Core Facility 7T Experimental MRIs

Two experimental 7 Tesla magnetic resonance imaging machines were purchased by the Center for Stroke Research CSB (Device 1) and the Cluster of Excellence NeuroCure (Device 2) with the aim of creating an experimental platform for small animal imaging. The facilities will service projects in the areas of A) Experimental Neuroimaging and B) Molecular Imaging, but projects in other fields of research are explicitly encouraged.

The Core Facility is available to all public research institutions and interested industrial partners.

### Service Offering

We offer access to the following 2 devices (Bruker BioSpin MRI GmbH):



Device 1 | PharmaScan 70/16 US (installation 03/2003; upgrade 04/2013)  
Bruker Software Paravision 5.1

Device 2 | BioSpec 70/20 USR (installation 08/2013)  
Bruker Software Paravision 6.0

### Equipment:

- 1H – linear volume resonators (38 mm, 72 mm, 86 mm bore)
- 1H – quadrature volume resonators (20 / 23 mm bore)
- 1H – quadrature mouse head / rat head – surface coils
- 1H – planar surface coils (10 / 20 / 30 mm)
- 1H / 19F – volume resonator (40 mm)
- 1H MRI CryoProbe™

Several animal beds for use with gas anesthesia  
Temperature controlled warming blankets for mice and rats  
Small Animal Monitoring System (SA Instruments, Inc.) for remote observation of respiration, ECG, temperature, as well as cardiac and respiratory triggering  
Gas anesthesia with O<sub>2</sub> / N<sub>2</sub>O + Isoflurane

### Our service includes support from the core facility staff:

- Advice for MRI – study design, selection of the appropriate device and sequences
- Use of standard sequences with marginal modifications
- Carrying out measurements
- Performing measurements under guidance
- Training for independent MRI operation
- Advice on appropriate image analysis strategies

Extensive methodological and image analysis development will only be provided on the basis of scientific cooperation. For use of the 7T MRI facilities, an hourly fee will be charged.