**Introduction**
Magnetic resonance imaging and spectroscopy can provide detailed information about the structure and function of most parts of the body. A multitude of imaging methods can be used to obtain images with different kinds of contrast based on the characteristics of the imaged tissue. The MR department at Hvidovre Hospital houses a pre-clinical MR system which has been in use since 1988. The system operates at 4.7 T and has been recently upgraded to provide an advanced pre-clinical MR scanner suitable for a variety of applications.

**Ongoing work**
The group continues to develop and improve imaging and spectroscopy methods. A few applications are illustrated here.

The 4.7 T magnet has an inner bore diameter of 15.4 cm which makes it ideally suited for magnetic resonance imaging of small animals such as rats and mice.

Rat positioned with a surface coil for MR imaging and spectroscopy.

**Conclusion:**
The pre-clinical scanner is used within a wide range of projects. MR methods may be applied as a diagnostic tool and to study the effect of differing therapeutic strategies. The possibility of repeated studies on the same animal minimizes the number of research animals used. The pre-clinical work aims at developing methods that may ultimately be used in the clinic.

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