

The UK7T Network: developing the ultra-high field MRI platform for biomedical research.

<https://neurodegenerationresearch.eu/survey/the-uk7t-network-developing-the-ultra-high-field-mri-platform-for-biomedical-research/>

Infrastructure name

The UK7T Network: developing the ultra-high field MRI platform for biomedical research.

Institute/location

University of Nottingham

Key contact

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Project/infrastructure description

We propose to establish a UK7T Network that will bring together the 7T sites in Cambridge, Cardiff, Glasgow, Nottingham and Oxford to share expertise, build capacity, and develop harmonised approaches to image data acquisition, sharing and analysis. Once established, the UK7T Network will serve as a platform for future UK-wide, collaborative research programmes in 7T magnetic resonance (MR), including multi-site, large cohort clinical studies. The Partnership Grant will allow us to: 1) Increase the level of expertise in the UK in UHF magnetic resonance by sharing the experience that has been built up in Nottingham and Oxford, training a cohort of postdoctoral researchers and delivering a programme of targeted training workshops. 2) Ensure that the wider UK MR research community can exploit the UK's investment in 7T infrastructure (via organisation of symposia and workshops, establishment of a Network Advisory Committee, and provision of access to 7T scanning for pilot studies). 3) Produce a set of optimised 7T protocols for brain imaging for use by all of the UK 7T sites, including (i) anatomical and functional brain imaging methods that can be applied quickly; (ii) more advanced methods, such as diffusion imaging and arterial spin labelling, that require additional development work; (iii) standardised quality assurance protocols. 4) Work with the Dementias Platform UK's XNAT-based national image sharing and analysis platform to develop the capability to share, aggregate and analyse UHF data. 5) Demonstrate the UK7T Network's capability as a platform for multi-site studies, by evaluation of two demonstrator cohorts: (i) a core dataset of high-resolution brain images from 1000 healthy adults across the age lifespan; (ii) a pilot clinical study of twenty five early-stage Alzheimer's disease patients. 6) Establish a

robust UK7T Network management structure to support the development and exploitation of the UK's UHF infrastructure.

Date funding committed

01/04/2016

Date infrastructure operational

Total capital cost (Euros)

€ 1,423,792

Does the 'Total Capital Cost' include other associated costs?

Current infrastructure status

Is this entry applicable to another section of this questionnaire?

Further information available at:

7 tesla, capacity building, magnetic resonance imaging (MRI), partnership, ultra-high field

Types:

Capital Infrastructure

Member States:

United Kingdom

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

N/A