James Grist PhD BSc MInstP MIPEM

Summary

Principal Investigator at the University of Oxford, **H-index:** 26, **Research funding secured as Co-I or PI**: £5,447,511, **Senior author papers:** 11, **First author papers:** 13, **First author book chapters:** 4, **PhD / MSc students successfully supervised or co-supervised to completion:** 5, **PhD / MSc students currently supervised or co-supervised:** 8.

Current positions

Principal Investigator, Oxford Centre for Clinical Magnetic Resonance Research.
Heads of MRI Physics group member, Institute of Physics and Engineering in Medicine.
Medical Physics Committee Member, Institute of Physics.

Selected senior author research papers

2024 **Evaluation of an integrated variable flip angle protocol to estimate coil B_1 for hyperpolarized MRI,** Magnetic Resonance in Medicine, DOI: 10.1002/mrm.30378.

2024 **Enabling SENSE Accelerated 2D CSI For Hyperpolarized Carbon-13 Imaging**, Scientific Reports, DOI: 10.1038/s41598-024-70892-8.

2023 **Directly Bound Deuterons Increase X-Nuclei Hyperpolarization using Dynamic Nuclear Polarization**, ChemPhysChem, DOI: 10.1002/cphc.202300144.

Selected first author research papers

2023 **Developing a metabolic clearance rate framework as a translational analysis approach for hyperpolarized 13C magnetic resonance imaging,** Scientific Reports, DOI: 10.1038/s41598-023-28643-8.

2022 **Lung Abnormalities Detected by Hyperpolarised Xenon MRI in Patients with Long-COVID**, Radiology, DOI: 10.1148/radiol.220069

2021 **The Lung Parenchyma Shows Limited Gas Transport on Hyperpolarized ^{129}Xenon MRI In Dyspneic Participants Three Months After COVID-19 Pneumonia: Preliminary Results**, Radiology, DOI: 10.1148/radiol.2021210033.

2020 **Creating a clinical platform for carbon-13 studies using the sodium-23 and proton resonance,** Magnetic Resonance in Medicine**,** DOI: 10.1002/mrm.28238

2019 **Quantifying normal human brain metabolism using hyperpolarized [1-^{13}C] pyruvate and magnetic resonance imaging**, Neuroimage**,** DOI: j.neuroimage.2019.01.027.

Selected research funding

2025 Principal Investigator, EUPHORIA: Establishing a UK and European hyperpolarised magnetic resonance imaging partnership*,* **UK Medical research Council***,* £1,295,347*.*

2024 Co-Investigator, Longitudinal Metabolic Imaging of Brain Inflammation, **John Fell fund**, £55,999.

2024 Co-Investigator, Assessing the utility of hyperpolarised Xenon-MRI in COPD valve replacement, **National Institute for Health Research**, £435,000.

2024 Principal Investigator, Developing Neuroimaging, **MRC iCASE studentship with GE Healthcare**, £130,345.

2023 Principal Investigator, Improving MRI acquisition time for the assessment of Multiple Sclerosis, **Oxford University Hospitals Charities**, £9,750.

2023 Principal Investigator, Implementation of transportable hyperpolarized Xenon gas, **BHF Centre for Research Excellence**, £37,000.

2023 Co-Investigator, Development of a metabolic imaging facility for the University of Oxford, **EPA Cephalosporin trust**, £235,000.

2022 Principal Investigator, Development of carbon-13 and xenon imaging methods, **MRC iCASE studentship joint with GE Healthcare**, £130,345.

2022 Co-Investigator, 'Metabolic imaging in a rodent model of chronic stroke', **Alzheimer's Research UK**, £5,000.

2021 Principal Investigator, Development of novel coils for hyperpolarised carbon-13, **MRC iCASE studentship joint with Pulse Teq**, £130,345.

2021 Co-Investigator, 'Hyperpolarised Xenon Magnetic Resonance Pulmonary Imaging in Patients with Long-COVID', **NIHR**, £1,860,063.

2020 Principal Investigator, 'Utilizing Metabolic Imaging to Provide an Early Readout of Therapeutic Efficacy in Autoimmune and Neurological Disease', Research Grant, **Bristol Myers Squibb**, £550,000.

2020 Principal Investigator, 'Implementation and development of hyperpolarized cerebral metabolic imaging at the University of Oxford, enabling novel studies of oncological, neurological, and psychiatric pathologies', Research Grant**, University of Oxford**, £51,600.

2020 Principal Investigator, 'Development and implementation of an advanced ^{23}Na prescan to enable clinical hyperpolarised cardiovascular imaging in Oxford', Travel Grant, **British Heart Foundation**, £6,900.