

CURRICULUM VITAE di:

Nominativo	Richard Geoffrey WISE
-------------------	-----------------------

Posizione accademica

Macrosettore:	02/D – FISICA APPLICATA, DIDATTICA E STORIA DELLA FISICA
Settore Concorsuale:	02/D1 – FISICA APPLICATA, DIDATTICA E STORIA DELLA FISICA
Settore Scientifico Disciplinare:	FIS/07
Qualifica:	Professore Ordinario (per chiamata diretta)
Anzianità nel ruolo:	6 mesi (dal 15/9/2019)
Sede Universitaria:	Università degli Studi 'G. d'Annunzio' di Chieti-Pescara
Struttura di appartenenza (dipartimento o altro)	Dipartimento di Neuroscienze, Imaging e Scienze Cliniche

Posizioni ricoperte precedentemente nel medesimo ateneo o in altri

Periodo	Fascia	Ateneo
1/8/2009-14/9/2019	Professore di prima (I) fascia (Chair)	Cardiff University (Regno Unito)
1/10/2006-31/7/2009	Professore di prima (I) fascia (Reader)	Cardiff University (Regno Unito)
2/1/2000-30/9/2006	Ricercatore	University of Oxford (Regno Unito)

Publicazioni Scientifiche

1. Foster CN, Steventon JJ, Helme D, Tomassini V, Wise RG. Assessment of the Effects of Aerobic Fitness on Cerebrovascular Function in Young Adults Using Multiple Inversion Time Arterial Spin Labelling MRI. *Frontiers in Physiology-Medical Physics and Imaging* 2020. In Press
2. Kopanoglu E, Deniz CM, Erturk A, Wise RG. Specific Absorption Rate Implications of Within-Scan Patient Head Motion for Ultra-high Field MRI. *Magn. Reson. Med.* 2020. In Press.
3. Germuska M, Chandler HL, Okell T, Fasano F, Tomassini V, Murphy K, Wise RG. A frequency-domain machine learning method for dual-calibrated fMRI mapping of oxygen extraction fraction (OEF) and cerebral metabolic rate of oxygen consumption (CMRO₂). *Frontiers in Artificial Intelligence, section Medicine and Public Health.* In Press, 2020.
4. Rodrigues JCL, Strelko G, Warnert EAH, Burchell AE, Neumann S, Ratcliffe LEK, Harris AD, Chant B, Bowles R, Nightingale AK, Wise RG, Paton JFR, Hart EC. Retrograde blood flow in the internal jugular veins of humans with hypertension may have implications for cerebral arterial blood flow. *Eur Radiol.* 2020 Mar 10. doi: 10.1007/s00330-020-06752-6. [Epub ahead of print] PubMed PMID: 32157411.
5. Saxena N, Gili T, Diukova A, Huckle D, Hall JE and Wise RG. Mild Propofol Sedation Reduces Frontal Lobe and Thalamic Cerebral Blood Flow: An Arterial Spin Labeling Study. *Front. Physiol.* 2019. 10:1541. doi: 10.3389/fphys.2019.01541. PMID: 31920729
6. Clarke WT, Mouglin O, Driver ID, Rua C, Morgan AT, Asghar M, Clare S, Francis S, Wise RG, Rodgers CT, Carpenter A, Muir K, Bowtell R. Multi-site harmonization of 7 tesla MRI neuroimaging protocols. *Neuroimage.* 2019 Nov 8:116335. doi: 10.1016/j.neuroimage.2019.116335. [Epub ahead of print] PubMed PMID: 31712167.
7. Furby HV, Warnert EA, Marley CJ, Bailey DM, Wise RG. Cardiorespiratory fitness is associated with increased middle cerebral arterial compliance and decreased cerebral blood flow in young healthy adults: A pulsed ASL MRI study. *J Cereb Blood Flow Metab.* 2019 Sep 30:271678X19865449. doi: 10.1177/0271678X19865449.[Epub ahead of print] PubMed PMID: 31564194.
8. Driver ID, Stobbe RW, Wise RG, Beaulieu C. Venous contribution to sodium MRI in the human brain. *Magn Reson Med.* 2019 Sep 25. doi: 10.1002/mrm.27996. [Epub ahead of print] PubMed PMID: 31556169.
9. Rowland BC, Driver ID, Tachrount M, Klomp DWJ, Rivera D, Forner R, Pham A, Italiaander M, Wise RG. Whole brain 31 P MRSI at 7T with a dual-tuned receive array. *Magn Reson Med.* 2020 Feb;83(2):765-775. doi: 10.1002/mrm.27953. Epub 2019 Aug 23. PubMed PMID: 31441537.
10. Douglas KM, Groves S, Porter RJ, Jordan J, Wilson L, Melzer TR, Wise RG, Bisson JI, Bell CJ. Traumatic imagery following glucocorticoid administration in earthquake-related post-traumatic stress disorder: A preliminary functional magnetic resonance imaging study. *Aust N Z J Psychiatry.* 2019 Dec;53(12):1167-1178. doi: 10.1177/0004867419851860. Epub 2019 May 31. PubMed PMID: 31146540.
11. Lansdown AJ, Warnert EAH, Sverrisdottir Y, Wise RG, Rees A. Regional cerebral activation accompanies sympathoexcitation in women with polycystic ovary syndrome. *The Journal of Clinical Endocrinology and Metabolism. J Clin Endocrinol Metab.* 2019 Sep 1;104(9):3614-3623. doi: 10.1210/jc.2019-00065. PMID: 31127833
12. Steventon JJ, Foster C, Furby H, Helme D, Wise R, Murphy K. Hippocampal Blood Flow is Increased after Twenty Minutes of Moderate-intensity Exercise. *Cereb Cortex.* 2019 Jun 19. pii: bhz104. doi: 10.1093/cercor/bhz104. [Epub ahead of print] PMID: 31216005.

13. Lipp I, Jones DK, Bells S, Sgarlata E, Foster C, Stickland R, Davidson AE, Tallantyre EC, Robertson NP, Wise RG, Tomassini V. Comparing MRI metrics to quantify white matter microstructural damage in multiple sclerosis. *Hum Brain Mapp.* 2019 Mar 19. doi: 10.1002/hbm.24568. [Epub ahead of print] PubMed PMID: 30891838.
14. Chandler HL, Wise RG, Murphy K, Tansey KE, Linden DEJ, Lancaster TM. Polygenic impact of common genetic risk loci for Alzheimer's disease on cerebral blood flow in young individuals. *Sci Rep.* 2019 Jan 24;9(1):467. doi:10.1038/s41598-018-36820-3. PubMed PMID: 30679549; PubMed Central PMCID: PMC6345995.
15. Prokopiou PC, Pattinson KTS, Wise RG, Mitsis GD. Modeling of dynamic cerebrovascular reactivity to spontaneous and externally induced CO₂ fluctuations in the human brain using BOLD-fMRI. *Neuroimage.* 2018 Nov 10;186:533-548. doi: 10.1016/j.neuroimage.2018.10.084. [Epub ahead of print] PubMed PMID: 30423427.
16. Germuska M, Chandler HL, Stickland RC, Foster C, Fasano F, Okell TW, Steventon J, Tomassini V, Murphy K, Wise RG. Dual-calibrated fMRI measurement of absolute cerebral metabolic rate of oxygen consumption and effective oxygen diffusivity. *Neuroimage.* 2019 Jan 1;184:717-728. doi: 10.1016/j.neuroimage.2018.09.035. Epub 2018 Sep 29. PubMed PMID: 30278214; PubMed Central PMCID: PMC6264385.
17. Mehler DMA, Williams AN, Krause F, Lührs M, Wise RG, Turner DL, Linden DEJ, Whittaker JR. The BOLD response in primary motor cortex and supplementary motor area during kinesthetic motor imagery based graded fMRI neurofeedback. *Neuroimage.* 2019 Jan 1;184:36-44. doi: 10.1016/j.neuroimage.2018.09.007. Epub 2018 Sep 8. PubMed PMID: 30205210; PubMed Central PMCID: PMC6264383.
18. Tommasin S, Mascali D, Moraschi M, Gili T, Hassan IE, Fratini M, DiNuzzo M, Wise RG, Mangia S, Macaluso E, Giove F. Scale-invariant rearrangement of resting state networks in the human brain under sustained stimulation. *Neuroimage.* 2018 Oct 1;179:570-581. doi: 10.1016/j.neuroimage.2018.06.006. Epub 2018 Jul 5. PubMed PMID: 29908935; PubMed Central PMCID: PMC6538940.
19. Stickland R, Allen M, Magazzini L, Singh KD, Wise RG, Tomassini V. Neurovascular Coupling During Visual Stimulation in Multiple Sclerosis: A MEG-fMRI Study. *Neuroscience.* 2018 Mar 23. pii: S0306-4522(18)30209-4. doi:10.1016/j.neuroscience.2018.03.018. [Epub ahead of print] PubMed PMID: 29580963.
20. Nikolaou F, Orphanidou C, Murphy K, Wise RG, Mitsis GD. Investigation Of Interaction Between Physiological Signals And fMRI Dynamic Functional Connectivity Using Independent Component Analysis. *Conf Proc IEEE Eng Med Biol Soc.* 2018 Jul;2018:10191023. doi:10.1109/EMBC.2018.8512465. PubMed PMID:30440564.
21. Merola A, Germuska MA, Murphy K, Wise RG. Assessing the repeatability of absolute CMRO₂, OEF and haemodynamic measurements from calibrated fMRI. *Neuroimage.* 2018 Feb 14;173:113-126. doi: 10.1016/j.neuroimage.2018.02.020. [Epub ahead of print] PubMed PMID: 29454105.
22. Tommasin S, Mascali D, Gili T, Assan IE, Moraschi M, Fratini M, Wise RG, Macaluso E, Mangia S, Giove F. Task-related modulations of BOLD low-frequency fluctuations within the default mode network. *Front Phys.* 2017 Jul;5. pii: 31. doi: 10.3389/fphy.2017.00031. Epub 2017 Jul 25.
23. Driver ID, Wise RG, Murphy K. Graded Hypercapnia-Calibrated BOLD: Beyond the Iso-metabolic Hypercapnic Assumption. *Front Neurosci.* 2017 May 18;11:276. doi: 10.3389/fnins.2017.00276. eCollection 2017. PubMed PMID: 28572755; PubMed Central PMCID: PMC5435758.
24. Rowland MJ, Ezra M, Winkler A, Payashi G, Lamb C, Kelly M, Okell TW, Westbrook J, Wise RG, Douaud G, Pattinson KT. Calcium channel blockade with nimodipine reverses

- MRI evidence of cerebral oedema following acute hypoxia. *J Cereb Blood Flow Metab.* 2017 Jan 1;271678X17726624. doi: 10.1177/0271678X17726624. [Epub ahead of print]
25. Merola A, Germuska MA, Warnert EA, Richmond L, Helme D, Khot S, Murphy K, Rogers PJ, Hall JE, Wise RG. Mapping the pharmacological modulation of brain oxygen metabolism: the effects of caffeine on absolute CMRO(2) measured using dual calibrated fMRI. *Neuroimage.* 2017 Mar 17. pii: S1053-8119(17)30236-7. doi: 10.1016/j.neuroimage.2017.03.028. [Epub ahead of print] PubMed PMID: 28323164.
 26. Hayen A, Wanigasekera V, Faull OK, Campbell SF, Garry PS, Raby SJ, Robertson J, Webster R, Wise RG, Herigstad M, Pattinson KT. Opioid suppression of conditioned anticipatory brain responses to breathlessness. *Neuroimage.* 2017 Jan 3;150:383-394. doi: 10.1016/j.neuroimage.2017.01.005. [Epub ahead of print] PubMed PMID: 28062251.
 27. Warnert EA, Rodrigues JC, Burchell AE, Neumann S, Ratcliffe LE, Manghat NE, Harris AD, Adams Z, Nightingale AK, Wise RG, Paton JF, Hart EC. Is High Blood Pressure Self-Protection for the Brain? *Circ Res.* 2016 Dec 9;119(12):e140-e151. Epub 2016 Sep 26. PubMed PMID: 27672161.
 28. Germuska M, Merola A, Murphy K, Babic A, Richmond L, Khot S, Hall JE, Wise RG. A forward modelling approach for the estimation of oxygen extraction fraction by calibrated fMRI. *Neuroimage.* 2016 Jun 6;139:313-323. doi: 10.1016/j.neuroimage.2016.06.004. [Epub ahead of print] PubMed PMID: 27282477.
 29. Warnert EAH, Verbree J, Wise RG, van Osch MJP. Using high field magnetic resonance imaging to estimate distensibility of the middle cerebral artery. *Neurodegenerative Diseases. Neurodegener Dis.* 2016;16(5-6):407-10. doi: 10.1159/000446397. Epub 2016 Jul 23. PMID:27449212
 30. Prokopiou PC, Murphy K, Wise RG, Mitsis GD. Estimation of voxel-wise dynamic cerebrovascular reactivity curves from resting-state fMRI data. *Conf Proc IEEE Eng Med Biol Soc.* 2016 Aug;2016:1143-1146. doi: 10.1109/EMBC.2016.7590906. PubMed PMID: 28268528.
 31. Tomassini V, d'Ambrosio A, Petsas N, Wise RG, Sbardella E, Allen M, Tona F, Fanelli F, Foster C, Carni M, Gallo A, Pantano P, Pozzilli C. The effect of inflammation and its reduction on brain plasticity in multiple sclerosis: MRI evidence. *Hum Brain Mapp.* 2016 Jul;37(7):2431-45. doi: 10.1002/hbm.23184. Epub 2016 Mar 18. PubMed PMID: 26991559; PubMed Central PMCID: PMC5069650.
 32. Carhart-Harris RL, Muthukumaraswamy S, Roseman L, Kaelen M, Droog W, Murphy K, Tagliazucchi E, Schenberg EE, Nest T, Orban C, Leech R, Williams LT, Williams TM, Bolstridge M, Sessa B, McGonigle J, Sereno MI, Nichols D, Hellyer PJ, Hobden P, Evans J, Singh KD, Wise RG, Curran HV, Feilding A, Nutt DJ. Neural correlates of the LSD experience revealed by multimodal neuroimaging. *Proc Natl Acad Sci U S A.* 2016 Apr 26;113(17):4853-8. doi: 10.1073/pnas.1518377113. Epub 2016 Apr 11. PubMed PMID: 27071089; PubMed Central PMCID: PMC4855588.
 33. Nikolaou F, Orphanidou C, Papakyriakou P, Murphy K, Wise RG, Mitsis GD. Spontaneous physiological variability modulates dynamic functional connectivity resting-state fMRI. *Philos Trans A Math Phys Eng Sci.* 2016 May 13;374(2067). pii: 20150183. doi: 10.1098/rsta.2015.0183. PubMed PMID: 27044987.
 34. Merola A, Murphy K, Stone AJ, Germuska MA, Griffeth VE, Blockley NP, Buxton RB, Wise RG. Measurement of oxygen extraction fraction (OEF): An optimized BOLD signal model for use with hypercapnic and hyperoxic calibration. *Neuroimage.* 2016 Apr 1;129:159-74. doi: 10.1016/j.neuroimage.2016.01.021. [Epub ahead of print] PubMed PMID: 26801605.
 35. Bishop CA, Johnson SM, Wall MB, Janiczek RL, Shanga G, Wise RG, Newbould RD, Murphy PS. Magnetic resonance imaging reveals the complementary effects of

- decongestant and Breathe Right Nasal Strips on internal nasal anatomy. *Laryngoscope*. 2016 Feb 10. doi: 10.1002/lary.25906. [Epub ahead of print] PubMed PMID: 26865420.
36. Taylor AM, Harris AD, Varnava A, Phillips R, Hughes O, Wilkes AR, Hall JE, Wise RG. Neural responses to a modified Stroop paradigm in patients with complex chronic musculoskeletal pain compared to matched controls: an experimental functional magnetic resonance imaging study. *BMC Psychol*. 2016 Feb 1;4(1):5. doi: 10.1186/s40359-016-0109-4. PubMed PMID: 26833066.
 37. Taylor AM, Harris AD, Varnava A, Phillips R, Taylor JO, Hughes O, Wilkes AR, Hall JE, Wise RG. A Functional Magnetic Resonance Imaging Study to Investigate the Utility of a Picture Imagination Task in Investigating Neural Responses in Patients with Chronic Musculoskeletal Pain to Daily Physical Activity Photographs. *PLoS One*. 2015 Oct 23;10(10):e0141133. doi: 10.1371/journal.pone.0141133. eCollection 2015. PubMed PMID: 26496709; PubMed Central PMCID: PMC4619796.
 38. Warnert EA, Hart EC, Hall JE, Murphy K, Wise RG. The major cerebral arteries proximal to the Circle of Willis contribute to cerebrovascular resistance in humans. *J Cereb Blood Flow Metab*. 2015 Nov 20. pii: 0271678X15617952. [Epub ahead of print] PubMed PMID: 26661241.
 39. Poon CY, Watkins WJ, Evans CJ, Tsai-Goodman B, Bolton CE, Cockcroft JR, Wise RG, Kotecha S. Pulmonary arterial response to hypoxia in survivors of chronic lung disease of prematurity. *Arch Dis Child Fetal Neonatal Ed*. 2015 Oct 21. pii: fetalneonatal-2015-309015. doi: 10.1136/archdischild-2015-309015. [Epub ahead of print] PubMed PMID: 26491031.
 40. Nikolaou F, Orphanidou C, Wise RG, Mitsis GD. Arterial CO₂ effects modulate dynamic functional connectivity in resting-state fMRI. *Conf Proc IEEE Eng Med Biol Soc*. 2015 Aug;2015:1809-12. doi: 10.1109/EMBC.2015.7318731. PubMed PMID: 26736631.
 41. Lipp I, Murphy K, Caseras X, Wise RG. Agreement and repeatability of vascular reactivity estimates based on a breath-hold task and a resting state scan. *Neuroimage*. 2015 Jun;113:387-96. doi: 10.1016/j.neuroimage.2015.03.004. Epub 2015 Mar 18.
 42. Lipp I, Evans CJ, Lewis C, Murphy K, Wise RG, Caseras X. The relationship between fearfulness, GABA+, and fear-related BOLD responses in the insula. *PLOS One*. 2015. Mar 26;10(3):e0120101. doi: 10.1371/journal.pone.0120101. eCollection 2015.
 43. Duff EP, Vennart W, Wise RG, Howard MA, Williams SC, Harris RE, Lee M, Wartolowska K, Wanigasekera V, Whitlock M, Tracey I, Woolrich M, Smith SM. Learning to identify CNS drug action and efficacy using multi-study fMRI data. *Science Translational Medicine*. 2015 Feb 11;7(274):274ra16. doi: 10.1126/scitranslmed.3008438.
 44. Warnert EAH, Murphy K, Hall JE, Wise RG. Noninvasive assessment of arterial compliance of human cerebral arteries with short inversion time arterial spin labeling. *J Cereb Blood Flow Metab*. 2015 Mar;35(3):461-8. doi: 10.1038/jcbfm.2014.219. Epub 2014 Dec 17. PubMed PMID: 25515216; PubMed Central PMCID: PMC4348387.
 45. Hinton EC, Wise RG, Singh KD, von Hecker U. Reasoning with linear orders: Differential parietal cortex activation in subclinical depression. An fMRI investigation in subclinical depression and controls. *Frontiers in Human Neuroscience*. 2015 Jan 19;8:1061. doi: 10.3389/fnhum.2014.01061. eCollection 2014.
 46. Coulson JM, Murphy K, Harris AD, Fjodorova M, Cockcroft JR, Wise RG. Correlation between baseline blood pressure and the brainstem FMRI response to isometric forearm contraction in human volunteers: a pilot study. *J Hum Hypertens*. 2015 Jul;29(7):449-55. doi: 10.1038/jhh.2014.103.
 47. Petsas N, Tomassini V, Filippini N, Sbardella E, Tona F, Piattella MC, Pozzilli C, Wise RG, Pantano P. Impaired Functional Connectivity Unmasked by Simple Repetitive Motor Task in Early Relapsing-Remitting Multiple Sclerosis. *Neurorehabil Neural Repair*. 2015

Jul;29(6):557-65. doi: 10.1177/1545968314558600. Epub 2014 Nov 21. PubMed PMID: 25416740.

48. Warnert EA, Harris AD, Murphy K, Saxena N, Tailor N, Jenkins NS, Hall JE, Wise RG. In vivo assessment of human brainstem cerebrovascular function: a multi-inversion time pulsed arterial spin labelling study. *J Cereb Blood Flow Metab.* 2014 Mar 5. doi: 10.1038/jcbfm.2014.39. [Epub ahead of print] PubMed PMID: 24594624.
49. Brain P, Strimenopoulou F, Diukova A, Berry E, Jolly A, Hall JE, Wise RG, Ivarsson M, Wilson FJ. Extracting drug mechanism and pharmacodynamic information from clinical electroencephalographic data using generalised semi-linear canonical correlation analysis. *Physiol Meas.* 2014 Dec;35(12):2459-74. doi:10.1088/0967-3334/35/12/2459. Epub 2014 Nov 17. PubMed PMID: 25402261.
50. Lipp I, Murphy K, Wise RG, Caseras X. Understanding the contribution of neural and physiological signal variation to the low repeatability of emotion-induced BOLD responses. *Neuroimage.* 2014 Feb 1;86:335-42. doi:pil: S1053-8119(13)01027-6. 10.1016/j.neuroimage.2013.10.015. [Epub ahead of print] PubMed PMID: 24128735.
51. Harris AD, Murphy K, Diaz CM, Saxena N, Hall JE, Liu TT, Wise RG. Cerebral blood flow response to acute hypoxic hypoxia. *NMR Biomed.* 2013 Dec;26(12):1844-52. doi: 10.1002/nbm.3026. Epub 2013 Oct 7. PubMed PMID: 24123253.
52. Poon CY, Edwards JM, Evans CJ, Harris AD, Tsai-Goodman B, Bolton CE, Cockcroft JR, Wise RG, Kotecha S. Assessment of pulmonary artery pulse wave velocity in children: An MRI pilot study. *Magn Reson Imaging.* 2013 Dec;31(10):1690-4. doi: 10.1016/j.mri.2013.08.006. Epub 2013 Oct 4. PubMed PMID: 24094811.
53. Wise RG, Harris AD, Stone A, Murphy K. Measurement of OEF and absolute CMRO₂: MRI-based methods using interleaved and combined hypercapnia and hyperoxia. *Neuroimage.* 2013 Dec;83:135-47. doi:pil: S1053-8119(13)00645-9. 10.1016/j.neuroimage.2013.06.008. [Epub ahead of print] PubMed PMID: 23769703.
54. Saxena N, Muthukumaraswamy SD, Diukova A, Singh K, Hall J, Wise R. Enhanced stimulus-induced gamma activity in humans during propofol-induced sedation. *PLoS One.* 2013;8(3):e57685. doi: 10.1371/journal.pone.0057685. Epub 2013 Mar 6. PubMed PMID: 23483920; PubMed Central PMCID: PMC3590225.
55. Gili T, Saxena N, Diukova A, Murphy K, Hall JE, Wise RG. The thalamus and brainstem act as key hubs in alterations of human brain network connectivity induced by mild propofol sedation. *Journal of Neuroscience.* 2013 Feb 27;33(9):4024-31. doi: 10.1523/JNEUROSCI.3480-12.2013. PMID:23447611.
56. Carhart-Harris RL, Leech R, Erritzoe D, Williams TM, Stone JM, Evans J, Sharp DJ, Feilding A, Wise RG, Nutt DJ. Functional Connectivity Measures After Psilocybin Inform a Novel Hypothesis of Early Psychosis. *Schizophr Bull.* 2012 Oct 27. [Epub ahead of print] PubMed PMID: 23044373.
57. Caseras X, Lawrence NS, Murphy K, Wise RG, Phillips ML. Ventral striatum activity in response to reward: differences between bipolar I and II disorders. *Am J Psychiatry.* 2013 May 1;170(5):533-41. doi: 10.1176/appi.ajp.2012.12020169. PubMed PMID: 23558337; PubMed Central PMCID: PMC3640293.
58. Hayen A, Herigstad M, Kelly M, Okell TW, Murphy K, Wise RG, Pattinson KT. The effects of altered intrathoracic pressure on resting cerebral blood flow and its response to visual stimulation. *Neuroimage.* 2012 Oct 27;66C:479-488. doi: 10.1016/j.neuroimage.2012.10.049. [Epub ahead of print] PubMed PMID: 23108273; PubMed Central PMCID: PMC3547172.
59. Harris AD, Robertson VH, Huckle DL, Saxena N, Evans CJ, Murphy K, Hall JE, Bailey DM, Mitsis G, Edden RA, Wise RG. Temporal dynamics of lactate concentration in the human brain during acute inspiratory hypoxia. *J Magn Reson Imaging.* 2013

Mar;37(3):739-45. doi: 10.1002/jmri.23815. [Epub 2012 Nov 29.] PubMed PMID: 23197421.

60. Peng T, Niazy R, Payne SJ, Wise RG. The effects of respiratory CO(2) fluctuations in the resting-state BOLD signal differ between eyes open and eyes closed. *Magn Reson Imaging*. 2013 Apr;31(3):336-45. doi: 10.1016/j.mri.2012.06.013. Epub 2012 Aug 22. PubMed PMID: 22921940.
61. Diukova A, Ware J, Smith JE, Evans JC, Murphy K, Rogers PJ, Wise RG. Separating neural and vascular effects of caffeine using simultaneous EEG-fMRI: Differential effects of caffeine on cognitive and sensorimotor brain responses. *Neuroimage*. 2012 Aug 1;62(1):239-49. doi: 10.1016/j.neuroimage.2012.04.041. Epub 2012 Apr 28. PMID: 22561357
62. Tomassini V, Johansen-Berg H, Jbabdi S, Wise RG, Pozzilli C, Palace J, Matthews PM. Relating brain damage to brain plasticity in patients with multiple sclerosis. *Neurorehabilitation and Neural Repair*. 2012 Jul;26(6):581-93. Epub 2012 Feb 9. PMID:22328685.
63. Carhart-Harris RL, Erritzoe D, Williams T, Stone JM, Reed LJ, Colasanti A, Tyacke RJ, Leech R, Malizia AL, Murphy K, Hobden P, Evans J, Feilding A, Wise RG, Nutt DJ. Neural correlates of the psychedelic state as determined by fMRI studies with psilocybin. *Proc Natl Acad Sci U S A*. 2012 Feb 7;109(6):2138-43. Epub 2012 Jan 23. PMID: 22308440
64. Carhart-Harris RL, Leech R, Williams TM, Erritzoe D, Abassi N, Bargiotas T, Hobden P, Evans J, Feilding A, Wise RG, Nutt DJ. Implications for psychedelic-assisted psychotherapy: functional magnetic resonance imaging study with psilocybin. *Br J Psychiatry*. 2012 Mar;200(3):238-44. Epub 2012 Jan 26. PMID: 22282432
65. Cochand NJ, Wild M, Brugniaux JV, Davies PJ, Evans KA, Wise RG, Bailey DM. Sea-level assessment of dynamic cerebral autoregulation predicts susceptibility to acute mountain sickness at high altitude. *Stroke*. 2011 Dec;42(12):3628-30.
66. Smith JE, Lawrence AD, Diukova A, Wise RG, Rogers PJ. Storm in a coffee cup: caffeine modifies brain activation to social signals of threat. *Social Cognitive and Affective Neuroscience*. 2012 Oct;7(7):831-40. doi: 10.1093/scan/nsr058. Epub 2011 Oct 4.
67. Hu L, Liang M, Mouraux A, Wise RG, Hu Y, Iannetti GD. Taking into account latency, amplitude and morphology: improved estimation of single-trial ERPs by wavelet filtering and multiple linear regression. *The Journal of Neurophysiology*. 2011 Dec;106(6):3216-29.
68. Murphy K, Harris AD, Diukova A, Evans CJ, Lythgoe DJ, Zelaya F, Wise RG. Pulsed arterial spin labelling perfusion imaging at 3T: estimating the number of subjects required in common designs of clinical trials. *Magn Reson Imaging*. 2011 Dec;29(10):1382-9. PMID: 21546190.
69. Muthukumaraswamy SD, Evans CJ, Edden RAE, Wise RG, Singh KD. Individual variability in the shape and amplitude of the BOLD-HRF correlates with endogenous GABAergic inhibition. *Hum Brain Mapp*. 2012 Feb;33(2):455-65. doi: 10.1002/hbm.21223. Epub 2011 Mar 17. PMID: 21416560.
70. Mouraux A, Diukova A, Lee MC, Wise RG, Iannetti GD. A multisensory investigation of the functional significance of the "pain matrix". *Neuroimage*. 2011 Feb 1;54(3):2237-49.
71. Murphy K, Harris AD, Wise RG. Robustly measuring vascular reactivity differences with breath-hold: normalising stimulus-evoked and resting state BOLD fMRI data. *Neuroimage*. 2011 Jan 1;54(1):369-79. PMID: 20682354.
72. Wise RG, Pattinson KTS, Bulte DP, Rogers R, Tracey I, Matthews PM, Jezzard P. Measurement of relative cerebral blood volume using BOLD contrast and mild hypoxic hypoxia. *Magn Reson Imaging*. 2010 Oct;28(8):1129-34. PubMed PMID: 20685053.

73. Edden RAE, Harris AD, Murphy K, Evans CJ, Saxena N, Hall JE, Bailey DM, Wise RG. Edited MRS is sensitive to changes in lactate concentration during inspiratory hypoxia. *J Magn Reson Imaging*. 2010 Aug;32(2):320-5. PubMed PMID: 20677257.
74. Mayhew SD, Macintosh BJ, Dirckx SG, Iannetti GD, Wise RG. Coupling of simultaneously acquired electrophysiological and haemodynamic responses during visual stimulation. *Magn Reson Imaging*. 2010 Oct;28(8):1066-77. PubMed PMID: 20399582.
75. Mhuirheartaigh RN, Rosenorn-Lanng D, Wise R, Jbabdi S, Rogers R, Tracey I. Cortical and subcortical connectivity changes during decreasing levels of consciousness in humans: a functional magnetic resonance imaging study using propofol. *J Neurosci*. 2010 Jul 7;30(27):9095-102.
76. Mundy ME, Honey RC, Downing PE, Wise RG, Graham KS, Dwyer DM. Material-independent and material-specific activation in fMRI after perceptual learning. *NeuroReport*. 2009 Oct 28;20(16):1397-401.
77. Mayhew SD, Dirckx SG, Niazy RK, Iannetti GD, Wise RG. EEG signatures of auditory activity correlate with simultaneously recorded fMRI responses in humans. *NeuroImage*. 2010;49(1):849-64.
78. Pattinson KT, Governo RJ, MacIntosh BJ, Russell EC, Corfield DR, Tracey I, Wise RG. Opioids depress cortical centers responsible for the volitional control of respiration. *J Neurosci*. 2009 Jun 24;29(25):8177-86. PMID:19553457
79. Piechnik SK, Evans J, Bary LH, Wise RG, Jezzard P. Functional changes in CSF volume estimated using measurement of water T(2) relaxation. *Magn Reson Med*. 2009 Mar;61(3):579-86.
80. Harvey AK, Pattinson KTS, Brooks JCW, Mayhew SD, Jenkinson M, Wise RG. Brainstem Functional Magnetic Resonance Imaging: Disentangling Signal from Physiological Noise. *Journal of Magnetic Resonance Imaging*. 2008 Dec;28(6):1337-44.
81. Pattinson KTS, Mitsis GD, Harvey AK, Jbabdi S, Dirckx S, Mayhew SD, Rogers R, Tracey I, Wise RG. Determination of the human brainstem respiratory control network and its cortical connections in vivo using functional and structural imaging. *NeuroImage*, 2009 Jan 15;44(2):295-305. Epub 2008 Sep 24.
82. Macintosh BJ, Pattinson KTS, Gallichan D, Ahmad I, Miller KL, Feinberg DA, Wise RG, Jezzard P. Measuring the effects of remifentanil on cerebral blood flow and arterial arrival time using GRASE MRI with Pulsed Arterial Spin Labelling. *Journal of Cerebral Blood Flow and Metabolism*. 2008 ;28(8):1514-22.
83. Mitsis GD, Iannetti GD, Smart TS, Tracey I, Wise RG. Regions of interest analysis in pharmacological fMRI: How do the definition criteria influence the inferred result? *Neuroimage*. 2008;40(1):121-32.
84. Pattinson KT, Rogers R, Mayhew SD, MacIntosh BJ, Lee MC, Wise RG. Remifentanil-induced cerebral blood flow effects in normal humans: dose and ApoE genotype. *Anesth Analg*. 2008;106(1):347
85. Miller KL, Bulte DP, Devlin H, Robson MD, Wise RG, Woolrich MW, Jezzard P, Behrens TE. Evidence for a vascular contribution to diffusion fMRI at high b value. *Proc Natl Acad Sci U S A*. 2007 Dec 26;104(52):20967-72.
86. Brooks JC, Beckmann CF, Miller KL, Wise RG, Porro CA, Tracey I, Jenkinson M. Physiological noise modelling for spinal functional magnetic resonance imaging studies. *Neuroimage*. 2008;39(2):680-92.
87. Bulte D, Chiarelli P, Wise RG, Jezzard P. Measurement of cerebral blood volume in humans using hyperoxic MRI contrast. *J Magn Reson Imaging*. 2007 Oct;26(4):894-9.
88. Chiarelli PA, Bulte DP, Wise RG, Gallichan D, Jezzard P. A calibration method for quantitative BOLD fMRI based on hyperoxia. *Neuroimage*. 2007 Sep 1;37(3):808-20.

89. Dunckley P, Aziz Q, Wise RG, Brooks J, Tracey I, Chang L. Attentional modulation of visceral and somatic pain. *Neurogastroenterol Motil.* 2007 Jul;19(7):569-77.
90. Miskowiak K, Inkster B, Selvaraj S, Wise RG, Goodwin GM, Harmer CJ. Erythropoietin improves mood and modulates the cognitive and neural processing of emotion 3 days post administration. *Neuropsychopharmacology.* 2008 Feb;33(3):611-8.
91. Wise RG, Lujan BJ, Schweinhardt P, Peskett GD, Rogers R, Tracey I. The anxiolytic effects of midazolam during anticipation to pain revealed using fMRI. *Magn Reson Imaging.* 2007 Jul;25(6):801-10.
92. Chiarelli PA, Bulte DP, Gallichan D, Piechnik SK, Wise RG, Jezzard P. Flow-metabolism coupling in human visual, motor, and supplementary motor areas assessed by magnetic resonance imaging. *Magn Reson Med.* 2007 Mar;57(3):538-47.
93. Wise RG, Pattinson KTS, Bulte D, Chiarelli PA, Robbins P, Tracey I, Jezzard P. Dynamic forcing of end-tidal carbon dioxide and oxygen applied to functional magnetic resonance imaging. *Journal of Cerebral Blood Flow and Metabolism.* 2007 Aug;27(8):1521-32.
94. Bulte DP, Chiarelli PA, Wise RG, Jezzard P. Cerebral perfusion response to hyperoxia. *J Cereb Blood Flow Metab.* 2007 Feb;27(2):414-423.
95. Leknes SG, Bantick S, Willis CM, Wilkinson JD, Wise RG, Tracey I. Itch and motivation to scratch: an investigation of the central and peripheral correlates of allergen- and histamine-induced itch in humans. *J Neurophysiol.* 2007 Jan;97(1):415-22.
96. Pattinson KTS, Rogers R, Mayhew S, Tracey I, Wise RG. Pharmacological fMRI: measuring opioid effects upon the BOLD response to hypercapnia. *Journal of Cerebral Blood Flow and Metabolism.* 2007 Feb;27(2):414-423.
97. Mayhew SD, Iannetti GD, Woolrich MW, Wise RG. Automated single-trial measurement of amplitude and latency of laser-evoked potentials (LEPs) using multiple linear regression. *Clinical Neurophysiology.* 2006 Jun;117(6):1331-44.
98. Iannetti GD, Zambreanu L, Wise RG, Buchanan TJ, Huggins JP, Smart TS, Vennart W, Tracey I. Pharmacological modulation of pain-related brain activity during normal and central sensitization states in humans. *Proc Natl Acad Sci U S A.* 2005 Dec 13;102(50):18195-200.
99. Iannetti GD, Niazy RK, Wise RG, Jezzard P, Brooks JC, Zambreanu L, Vennart W, Matthews PM, Tracey I. Simultaneous recording of laser-evoked brain potentials and continuous, high-field functional magnetic resonance imaging in humans. *Neuroimage.* 2005;28(3):708-19.
100. Tjandra T, Brooks JC, Figueiredo P, Wise RG, Matthews PM, Tracey I. Quantitative assessment of the reproducibility of functional activation measured with BOLD and MR perfusion imaging: implications for clinical trial design. *Neuroimage.* 2005;27(2):393-401.
101. Dunckley P, Wise RG, Fairhurst M, Hobden P, Aziz Q, Chang L, Tracey I. A comparison of visceral and somatic pain processing in the human brainstem using functional magnetic resonance imaging. *J Neurosci.* 2005;25(32):7333-41.
102. Pattinson KTS, Bowes M, Wise RG, Parkes MJ, Morrell MJ. Evaluation of a non-invasive method of assessing opioid induced respiratory depression. *Anaesthesia.* 2005;60(5):426-32.
103. Dunckley P, Wise RG, Aziz Q, Painter D, Brooks J, Tracey I, Chang L. Cortical Processing of Visceral and Somatic Stimulation – Differentiating Pain Intensity from Unpleasantness. *Neuroscience.* 2005;133(2):533-42.
104. Zambreanu L, Wise RG, Brooks J, Iannetti G-D, Tracey I. A role for the brainstem in central sensitization in humans: evidence from Functional Magnetic Resonance Imaging. *Pain.* 2005;114(3):397-407.

105. Wise RG, Ide K, Poulin MJ, Tracey I. Resting fluctuations in arterial carbon dioxide induce significant low frequency variations in BOLD signal. *NeuroImage*. 2004; 21(4):1652-1664.
106. Youell PD, Wise RG, Bentley DE, Dickinson MR, King TA, Tracey I, Jones AK. Lateralisation of nociceptive processing in the human brain: a functional magnetic resonance imaging study. *NeuroImage*. 2004; 23(3):1068-1077.
107. Rogers R, Wise RG, Painter D, Longe SE, Tracey I. An investigation to dissociate the analgesic and anesthetic properties of ketamine using functional magnetic resonance imaging. *Anesthesiology*. 2004; 100(2): 292-301.
108. Wise RG, Williams P, Tracey I. Using fMRI to quantify the time dependence of remifentanyl analgesia in humans. *Neuropsychopharmacology*. 2004; 29(3): 626-635
109. Adcock JE, Wise RG, Oxbury JM, Oxbury SM, Matthews PM. Quantitative FMRI assessment of the differences in lateralization of language-related brain activation in patients with temporal lobe epilepsy. *NeuroImage*. 2003; 18(2): 423-38.
110. Bantick SJ, Wise RG, Ploghaus A, Clare S, Smith S, Tracey I. Imaging how attention modulates pain in humans using fMRI. *Brain*. 2002; 125: 310-9.
111. Wise RG, Rogers R, Painter D, Bantick S, Ploghaus A, Williams P, Rapeport G, Tracey I. Combining fMRI with a pharmacokinetic model to determine which brain areas activated by painful stimulation are specifically modulated by remifentanyl. *NeuroImage*. 2002; 16(4): 999-1014.
112. Wise RG, Al-Shafei AIM, Carpenter TA, Hall LD and Huang C L-H. Simultaneous measurement of blood and myocardial velocity in the rat heart by phase contrast MRI using sparse q-space sampling. *Journal of Magnetic Resonance Imaging*. 2005 22(5):614-27.
113. Al-Shafei AIM, Wise RG, Gresham GA, Bronns G, Carpenter TA, Hall LD, Huang CL-H. Non-invasive magnetic resonance imaging assessment of myocardial changes and the effects of angiotensin-converting enzyme inhibition in diabetic rats. *Journal of Physiology*. 2002; 538(Pt 2):541-553.
114. Al-Shafei AIM, Wise RG, Gresham GA, Carpenter TA, Hall LD, Huang CL-H. Magnetic resonance imaging analysis of cardiac cycle events in diabetic rats: the effect of angiotensin-converting enzyme inhibition. *Journal of Physiology*. 2002; 538(Pt 2):555-72.
115. Al-Shafei AIM, Wise RG, Grace AA, Carpenter TA, Hall LD, Huang C L-H. MRI analysis of right ventricular function in normal and spontaneously hypertensive rats. *Magnetic Resonance Imaging*. 2001; 19(10):1297-304.
116. Ploghaus A, Narain C, Beckmann CF, Clare S, Bantick S, Wise R, Matthews PM, Rawlins NP, Tracey I. Exacerbation of pain by anxiety is associated with activity in a hippocampal network. *Journal of Neuroscience*. 2001;21(24): 9896-903.
117. Longe SE, Wise RG, Bantick S, Lloyd D, Johansen-Berg H, McGlone F, Tracey I. Counter-stimulatory effects on pain perception and processing are significantly altered by attention: an fMRI study. *Neuroreport*. 2001 Jul 3;12(9):2021-5.
118. Wise RG, Huang CL-H, Al-Shafei AI, Carpenter TA, Hall LD. Geometrical models of left ventricular contraction from MRI of the normal and spontaneously hypertensive rat heart. *Physics in Medicine and Biology*. 1999;44(10):2657-76.
119. Wise RG, Huang CL-H, Gresham GA, Al-Shafei AI, Carpenter TA, Hall LD. Magnetic resonance imaging analysis of left ventricular function in normal and spontaneously hypertensive rats. *Journal of Physiology*. 1998;513(Pt 3):873-87.
120. Wise RG, Newling B, Gates AR, Xing D, Carpenter TA, Hall LD. Measurement of pulsatile flow using MRI and a Bayesian technique of probability analysis. *Magnetic Resonance Imaging*. 1996;14(2):173-8

REVIEWS

1. Wright ME, Wise RG. Can Blood Oxygenation Level Dependent Functional Magnetic Resonance Imaging Be Used Accurately to Compare Older and Younger Populations? A Mini Literature Review. *Front Aging Neurosci.* 2018 Nov 13;10:371. doi: 10.3389/fnagi.2018.00371. eCollection 2018. Review. PubMed PMID: 30483117; PubMed Central PMCID: PMC6243068.
2. Germuska M, Wise RG. Calibrated fMRI for mapping absolute CMRO(2): Practicalities and prospects. *Neuroimage.* 2018 Mar 29. pii: S1053-8119(18)30278-7. doi: 10.1016/j.neuroimage.2018.03.068. [Epub ahead of print] PubMed PMID: 29605580.
3. Khalili-Mahani N, Rombouts SA, van Osch MJ, Duff EP, Carbonell F, Nickerson LD, Becerra L, Dahan A, Evans AC, Soucy JP, Wise R, Zijdenbos AP, van Gerven JM. Biomarkers, designs, and interpretations of resting-state fMRI in translational pharmacological research: A review of state-of-the-Art, challenges, and opportunities for studying brain chemistry. *Hum Brain Mapp.* 2017 Apr;38(4):2276-2325. doi: 10.1002/hbm.23516. Epub 2017 Feb 1. Review. PubMed PMID: 28145075.
4. Pattinson KT, Wise RG. Imaging the Respiratory Effects of Opioids in the Human Brain. *Adv Exp Med Biol.* 2016;903:145-56. doi: 10.1007/978-1-4899-7678-9_10. PubMed PMID: 27343094.
5. Harvey AK, Taylor AM, Wise RG. Imaging pain in arthritis: advances in structural and functional neuroimaging. *Curr Pain Headache Rep.* 2012 Dec;16(6):492-501. doi: 10.1007/s11916-012-0297-4. PubMed PMID: 23011761.
6. Tomassini V, Matthews PM, Thompson AJ, Fuglø D, Geurts JJ, Johansen-Berg H, Jones DK, Rocca MA, Wise RG, Barkhof F, Palace J. Neuroplasticity and functional recovery in multiple sclerosis. *Nat Rev Neurol.* 2012 Sep 18. doi: 10.1038/nrneurol.2012.179. [Epub ahead of print] PubMed PMID: 22986429.
7. Wise RG, Preston C. What is the value of FMRI in drug development. *Drug Discovery Today.* 2010 Nov;15(21-22):973-80.
8. Iannetti GD, Wise RG. BOLD functional MRI in disease and pharmacological studies: room for improvement? *Magn Reson Imaging.* 2007 Jul;25(6):978-88.
9. Matthews PM, Wise RG. Non-invasive imaging for experimental medicine in drug discovery. *Expert Opinion on Drug Discovery.* 2006; 1(2):111-12
10. Wise RG, Tracey I. The Role of FMRI in Drug Discovery. *Journal of Magnetic Resonance Imaging.* 2006.23(6):862-876
11. Tracey I, Wise RG. Pharmacological FMRI: a new tool for drug development in humans. *Journal of Pharmacy Practice.* 2001;14(5): 368-75.

Titoli ¹

- Direzione di enti o istituti di ricerca di alta qualificazione internazionale:

2015-2019, Head of MRI, Cardiff University Brain Research Imaging Centre
 2015-2019, Lead for Industrial Liaison, Cardiff University Brain Research Imaging Centre
 2006-2014, Director of fMRI, Cardiff University Brain Research Imaging Centre

- Responsabilità scientifica generale o di unità (work package, unità nazionale nei progetti europei o locale in quelli nazionali ecc.) per progetti di ricerca internazionali e nazionali ammessi al finanziamento sulla base di bandi competitivi che prevedano la revisione tra pari:

2019-2023	EPSRC, “An integrated MRI tool to map brain microvascular and metabolic function: improving imaging diagnostics for human brain disease” PI: RG Wise. Co-Is: Yulia Hicks, John Staffurth. Total value: £1,116,430
2019	Health and Care Research Wales, Pathway to Portfolio – Development funding, “Cystic Fibrosis-memory assessment and MRI scanning” PI: J Duckers. Co-Is: RG Wise, C Metzler-Baddeley. Total value” £16,410
2019-2021	Pfizer, ASPIRE, research awards. “Effect of Tofacitinib on Pain Processing in Rheumatoid Arthritis (ToPPRA)” PI: E Choy, Co-PI: RG Wise, Co-I: Sharmila Khot. Total value: £331,000
2017-2018	MRC Confidence in Concept (Cardiff University), “Demonstrating clinical utility of a non-invasive MRI tool to map altered brain oxygen metabolism: proof of concept in epilepsy” PI: RG Wise. Co-Is: Khalid Hamandi, Patrick Fielding, Hannah Chandler Total value: £49,884
2016-2019	Moondance Charitable Fund (Velindre NHS Trust), “An observational study of neurocognitive function in patients undergoing Stereotactic Radiosurgery at Velindre Cancer Centre” PI: J Powell Co-Is: RG Wise (lead imaging applicant), J Staffurth, S Iqbal, G Lewis, T Millin, A Bryant, A Johnson, DK Jones, W Gray. Total value: £124,362
2016-2017	Joint Programme – Neurodegenerative Disease Research (JPND), EU Funding: Working Groups for the Harmonisation and Alignment in Brain Imaging Methods for Neurodegeneration, “European Ultra-high field Imaging Network for Neurodegenerative Diseases, EUFIND” PI: E Duzeil Co-Is: RG Wise (Lead for Cardiff), K Graham, D Linden & 73 others from 23 European sites. Total value: €50,000
2016-2019	Alzheimer’s Research UK, “Multi-centre optimization and harmonization of MRI image acquisition schemes: a UK-wide coordinated approach to advanced neuroimaging in dementia” PI: D Thomas; Network investigator: RG Wise (Lead for Cardiff), A Lawrence & 19 others from 8 UK sites. Total value: £249,807
2016 - 2021	Arthritis Research UK, Biomechanics and Bioengineering Centre (Centre renewal grant) PI: B Caterson, Co-applicant: RG Wise and 15 others. Total value £2,000,000
2016-2020	MRC, “Characterising brain network differences during scene perception and memory in young adult APOE-e4 carriers: multi-modal imaging in ALSPAC” PI: K Graham Co-Is: A Lawrence, Richard Wise, Derek Jones, Jiaxiang Zhang, Nicola Filippini, Lisa Saksida, Clare Mackay, Katarzyna Kordas. Total value: £1,865,362
2016-2019	MRC Partnership Grant, “The UK7T Network: developing the ultra-high field MRI platform for biomedical research” PI: R Bowtell Co-Is: RG Wise (lead Cardiff applicant) & 17 others Total value: £1,302,903

¹ In via esemplificativa sono indicate alcune voci

2016-2019	BRACE PhD studentship, “Revealing hippocampal dysfunction in mild cognitive impairment by ultra-high field magnetic resonance imaging (MRI)” PI: R Kauppinen Co-Is: RG Wise, L Coulthard, P Warr Total value: £84,327
2015-2016	Wellcome ISSF Seedcorn (Cardiff University), “Imaging the distribution of intra- and extracellular sodium in the human brain using 7 Tesla MRI” PI: Richard Wise , Co-Is: I Driver, C Beaulieu Total value: £34,000
2014-2016	MRC, Enhancing UK's Clinical Research Capabilities and Technologies 2014. “Ultra-High Field MRI: Advancing Clinical Neuroscientific Research in Experimental Medicine” PI: Richard Wise . Co-Is: Derek Jones, Krish Singh, David Linden, Risto Kauppinen, Kim Graham Total value: £6,700,929
2014-2019	EPSRC, Strategic Equipment Fund. “National Facility for In Vivo MR Imaging of Human Tissue Microstructure” PI: Derek Jones (Cardiff). Co-Is: Daniel Alexander (UCL), Richard Bowtell (Nottingham), Mara Cercignani (Sussex), Flavio Dell'Acqua (KCL), Geoff Parker (Manchester), Krish Singh (Cardiff), Richard Wise (Cardiff), Karla Miller (Oxford), Hywel Thomas (Cardiff). Total value: £2,944,960
2016-2021	Wellcome Trust, Strategic Award “Multi-Scale and Multi-Modal Assessment of Coupling in the Healthy and Diseased Brain” PI: Derek Jones (Cardiff). Co-Is: Yaniv Assaf (Tel Aviv / Cardiff), Chris Chambers (Cardiff), Kim Graham (Cardiff), Peter Jezzard (Oxford), David Linden (Cardiff), Peter Morris (Nottingham), David Nutt (ICL), Petroc Sumner (Cardiff), Krishna Singh (Cardiff), Richard Wise (Cardiff). Total value: £4,900,000
2014-2016	The Wolfson Foundation “CUBRIC – The Cardiff University Brain Research Imaging Centre” PI: Krishna Singh. Co-Is: Derek Jones, Richard Wise, David Linden, Kim Graham, Chris Chambers, Petroc Sumner. Total value: £1,000,000
2014-2017	The Dunhill Medical Trust (R333/0214), “Effect of d-cycloserine on brain processing of breathlessness in COPD patients undergoing pulmonary rehabilitation.” PI: Kyle Pattinson. Co-Is: N Rahman, H Johansen-Berg, C Harmer, A Reinecke, M Herigstad, RG Wise, S Booth. Total value: £267,743
2013-2016	EPSRC, (EP/K020404/1), “Quantitative functional MRI: developing non-invasive neuroimaging to map the human brain's consumption of oxygen” PI: Richard Wise , Co-Is: JE Hall, W Gray, V Tomassini, CJ Evans, K Murphy Total value: £706,000
2014-2017	Multiple Sclerosis Society, “Predicting the individual’s potential for functional recovery in Multiple Sclerosis: a novel clinical and neuroimaging strategy.” PI: Valentina Tomassini, Co-Is: Richard Wise, Derek Jones, Neil Robertson Total value: £263,362
2013-2018	ESRC Multidisciplinary PhD Pilot Scheme, “Wales Integrative PhD programme in Neurodegeneration (WIN): Unifying Social and Biological Approaches to Early Detection of Dementia.” PI: Kim Graham, Co-Is: Lawrence, Hedgecoe, Haddock, Maio, Wise, Woods, Morris, Williams, Latimer. Total value: £550,000
2012-2017	Wellcome Trust “Dedicated Computing Infrastructure for CUBRIC” Applicants: Prof D Jones, Prof K Singh, Prof RG Wise Total value: £665,000
2008-2014 (extended 2016)	Wellcome Trust, 4 yr PhD programme in Integrative Neuroscience. Principal Investigators Prof Vincenzo Crunelli, Prof John Aggleton. Approx £4m. Co-Is: Prof Mark Good, Prof Kim Graham, Prof Robert Honey, Prof Derek Jones, Prof Simon Killcross, Prof Andrew Lawrence, Prof John Pearce, Prof Krish Singh, Dr Ed Wilding, Dr Richard Wise , Prof Nick Craddock, Dr Lesley Jones, Dr George Kirov, Dr Michael O'Donovan, Prof Michael Owen, Prof Anita Thapar, Dr Marianne van den Bree, Prof Lawrence Wilkinson, Prof Julie Williams, Dr Nigel Williams, Prof Vladimir Buchman, Prof Alun Davies, Prof Stephen Dunnett, Prof Kevin Fox, Prof AJ Harwood, Dr Stuart Hughes, Prof Anne Rosser, Dr Frank Sengpiel.

2013-2015	<p>Wellcome ISSF Seedcorn (Cardiff University), “Metabolic oxygen consumption: developing a non-invasive MRI biomarker of pharmacological action in the human brain” PI: Richard Wise, Co-Is: K Murphy, JE Hall Total value: £49,436</p>
2013-2014	<p>Wellcome ISSF (Cardiff University), “Elucidating functional brain imaging biomarkers for risk genes implicated in Alzheimer’s disease” PI: Kim Graham, Co-Is: Richard Wise, Andrew Lawrence, Julie Williams, Valerie O’Donnell, Simon Jones. Total value: £68,000</p>
2013-2015	<p>National Institute for Academic Anaesthesia (Association of Anaesthetists of Great Britain and Northern Ireland), “Visual gamma responses during sedation; comparing the mechanisms of action of GABAergic and non GABAergic sedatives” PI: Neeraj Saxena, Co-Is: JE Hall, RG Wise, SD Muthukumaraswamy, KD Singh Total value: £15,000</p>
2012-2014	<p>IPMCN & MRCCNGG, Cardiff University “Promoting and imaging functional recovery in multiple sclerosis” Applicants: Dr V Tomassini, Prof N Robertson, Prof Derek Jones, Prof Richard Wise. Total value: £5,000</p>
2012-2014	<p>NMHRI Seed corn, Cardiff University “Relating brain damage to brain functional reorganization and clinical disability in Neuromyelitis Optica” Applicants: Dr V Tomassini, Prof N Robertson, Prof Derek Jones, Prof Richard Wise Total value: £5,000</p>
2009 - 2014	<p>Arthritis Research Campaign, Cardiff Institute of Biomechanics and Bioengineering Research (CIBER) – Centre establishment grant. Applicant: Prof Victor Duance, Co-applicant: Richard Wise and others. Total value £2,500,000</p>
2009-2015	<p>Cardiff University President’s Scholarships PhD programme “CRANIUM Cardiff Research into Advanced Neuroimaging Methods.” 6 PhD studentships over 3 years’ intake. Applicants: Richard Wise, Derek Jones, Krish Singh, Frank Sengpiel Total value: £420,000</p>
2012-2013	<p>SARTRE Bio-E “Developing quantitative fMRI: a tool to measure cerebrovascular function in the human brainstem” Applicants: RG Wise (PI), JE Hall, J Paton, E Hart Total value: £25,000</p>
2013	<p>EPSRC Bridging the Gaps Applicants: Prof Richard Wise, Dr Yulia Hicks Total value: £3,000 approx</p>
2010-2012	<p>Waterloo Foundation “Advanced neuroimaging in BECCTS.” Applicants: Prof D Jones, Prof K Singh, Prof RG Wise, Dr D McGonigle, Dr S Muthukumaswamy Total value: £110,000</p>
2010-2012	<p>Welsh Assembly Government: Academic Expertise for Business (A4B), Collaborative Industrial Research Projects (CIRP) “The Integrated Brain Imaging and Stimulation Project (IBIS)” Applicants: Dr Chris Chambers, Prof Krish Singh, Prof Richard Wise, Prof Derek Jones, Prof David Jiles. Total value: £194,000</p>
2010-2012	<p>Alzheimer’s Research Trust Cerebral small vessel disease, blunted perfusion responses and adaptation to early Alzheimer’s disease. Applicant: Dr Mike O’Sullivan, Co-applicant: Richard Wise, Derek Jones, Tony Bayer. Total value £26,950</p>
2009 - 2011	<p>National Institute for Academic Anaesthesia UK. “Imaging neural responses to pain-related stimuli in patients with chronic non malignant pain before and after a pain management programme.” Applicant: Prof Judith Hall, Co-Applicant: Richard Wise Total value: £50,000</p>

2009-2011	European Society of Anaesthesiologists. “A combined neurophysiological and haemodynamic investigation of changes in functional connectivity in the human brain during sedation.” Applicant: Prof Judith Hall, Co-Applciant: Richard Wise Total value: £10,000
2011-2012	EPSRC, (EP/I01487X/1), “Improving EEG reading of brain states for clinical applications using a data-driven joint model of FMRI and EEG” PI: Richard Wise, CoIs: Yulia Hicks, Cyril Charron, £132,000
2005 - 2010	MRC Career Development Award, “Pharmacological neuroimaging: assessing FMRI as a biomarker of changes in neuronal activity using combined EEG and FMRI.” (Oxford University then transferred to Cardiff University) Principal investigator (Fellow): Richard Wise. £472,864 , including fellow's and RA's salary. Ref: G120/969
2009	Cardiff University International Collaboration Award with Dr Tommaso Gili, Dept Physics, University of Rome La Sapienza. Applicant: Richard Wise Total value £3000
2008 - 2010	Pfizer Ltd, “Optimising pharmacological FMRI for drug development” (Cardiff University). Principal investigator: Richard Wise Total value, £257,000 , including 2 years of senior post-doctoral support
2010-2011	Pfizer Ltd, "Pharmacological modulation of free-running EEG". PI Richard Wise. £61,000
2011	Wellcome Trust Value in People award for 9 months' salary for Dr Ashley Harris, PI Richard Wise £35,000
2008 - 2009	Wales Institute for Cognitive Neuroscience (Cardiff University) 1) “Imaging neural responses to pain-related stimuli in chronic pain patients.” RG Wise, A Taylor, R Buck, A Varnava, O Hughes (Cardiff and Swansea). £17,500 2) “Neural mechanisms of response reversal; probabilistic versus assured contingencies.” Sub grant held by RG Wise, S Van Goozen, J Savage. £5,000 . 3) “Mapping the climbing fibre system in humans” J Diedrichsen, RG Wise, D McGonigle. £13,000 . Cardiff and Bangor Universities.
2006-2008	International Anaesthesia Research Society (Oxford University), “Investigation of pharmacological modulation of respiratory control using FMRI.” Principal Investigator: Dr Kyle Pattinson. R Wise (co-applicant). Total value \$79,632 (£45,000) .
2005 - 2008	The Association of Anaesthetists of Great Britain and Ireland (Oxford University). “Imaging the neural correlates of respiratory control” Grant-holder: Dr Jaideep Pandit, Nuffield Dept Anaesthetics. Co-investigators: Dr Richard Wise and Dr Kyle Pattinson. £23,760 in research costs.
2006 - 2007	Pfizer Ltd (Oxford University). “Assessing measures of brain activity in pharmacological FMRI.” Principal investigator: Dr Richard Wise. £70,000 to fund a post-doctoral scientist for one year.
2006 - 2008	GlaxoSmithKline (Oxford University). “Developing pharmacokinetic / pharmacodynamic measures in human FMRI.” Principal investigator: Prof Irene Tracey. Co-Investigator: Dr Richard Wise. Approx £200,000 . The grant funded a post-doctoral scientist for two years (Dr Ricardo Governo).
2005 - 2006	Merck Sharp & Dohme (Oxford University), “An Investigation of Drug Effects on Anxiety Using Brain Imaging.” Principal investigator: Prof Irene Tracey. Co-investigator Richard Wise. £102,800 .
2005	Wellcome Trust Value in People Award (Oxford University). “Developing pharmacological neuroimaging.” Principal investigator: Richard Wise. £16,100 awarded by competition within the University of Oxford.
2002 - 2005	Wellcome Trust Advanced Training Fellowship (Oxford University). “Developing FMRI of pharmacological analgesia.” Principal investigator and Fellow: Richard Wise. £200,000
2002	Dr Hadwen Trust (Oxford University). Human pain imaging. Principal investigator: Irene Tracey. Richard Wise was the named post-doc. £118,000
2000 - 2002	GlaxoSmithKline (Oxford University). Human pharmacological FMRI. Principal investigator: Irene Tracey. Richard Wise was the named post-doc. £100,000 .
1994 -	Wellcome Trust PhD Studentship in Mathematical Biology (Cambridge University). “MRI studies of

1998	cardiovascular function” Named student: Richard Wise. Approx £70,000
1994	British Heart Foundation PhD Studentship (Cambridge University) . Named student: Richard Wise. Approx £50,000 (transferred to another PhD student).

- Incarichi di di ricerca (fellowship) presso qualificati atenei e istituti di ricerca esteri o sovranazionali:

2006-2010	MRC Career Development Fellow , Cardiff University
2005-Sept 2006	MRC Career Development Fellow , FMRIB Centre, University of Oxford
2006-Sept 2006	University Research Lecturer , Department of Clinical Neurology, University of Oxford
2005	Wellcome Trust “Value in People” Fellow , Department of Human Anatomy and Genetics, University of Oxford
2002-2005	Wellcome Trust Advanced Training Research Fellow , Department of Human Anatomy and Genetics and FMRIB Centre, University of Oxford

- Significativi riconoscimenti per l’attività scientifica
 - Organizzatore di “Imaging Brain Physiology 2017” presso CUBRIC, un congresso internazionale
 - EPSRC, Wellcome Trust e The Brain Tumour Charity grant panels
 - Honorary visiting Professor, Department of Physics, University of Rome, La Sapienza (2011)
 - Honorary visiting scientist, Santa Lucia Foundation IRCCS, Rome (2012)
 - Membro del “International Society for Magnetic Resonance in Medicine” e moderatore degli sessioni scientifiche al congresso principale annuale
- Partecipazione come relatore a convegni di carattere scientifico nazionali o internazionali / letture invitate (selezionate)
 - Feb 2020. Institute of Neuroscience and Medicine, Medical Imaging Physics, Forschungszentrum Juelich GmbH. “fMRI-based quantitative mapping of human brain cerebrovascular and metabolic function”
 - Dec 2019. GLiMR (Glioma MR Imaging 2.0 COST action), Malta. “University of Chieti-Pescara, Italy & Cardiff University Brain Research Imaging Centre (CUBRIC), UK”
 - Nov 2019. University of Pennsylvania. “fMRI-based quantitative mapping of human brain cerebrovascular and metabolic function”
 - Nov 2019. Mt. Sainai Hospital New York. “Quantitative fMRI in neuro-pharmacological research”
 - Oct 2019. University of Calgary advanced imaging seminar. “fMRI: tools for quantifying brain oxygen metabolism and cerebral vascular function”
 - Oct 2019. University of Calgary Biomedical Engineering Conference, Canada. “Magnetic Resonance Imaging, it just keeps on giving ... or ... half a career in interdisciplinary research”
 - Oct 2019. Bill and Melinda Gates Foundation Grand Challenges, Addis Ababa. “Neuroimaging methods for measuring cerebral metabolism and physiology”
 - Oct 2019. British Society of Neuroradiology, Cardiff. “MRI of vascular and metabolic function: opportunities at 3T and 7T”
 - Sept 2019. Università di Roma (La Sapienza). “Multi-parametric MRI of brain physiology: Developing fMRI to quantify brain function”
 - Sept 2019. GIDRM annual meeting, L’Aquila. “Quantitative mapping of human brain cerebrovascular and metabolic function”
 - July 2019. British Association of Psychopharmacology, Manchester. “Challenges and opportunities of fMRI in translational pharmacological research”

- June 2019. UK7T London meeting. “Cardiff 7T experiences: CUBRIC”
- May 2019. ITAB, DNISC, University of Chieti-Pescara. GIDRM meeting. “Multi-parametric MRI of brain physiology: developing fMRI to quantify brain function”
- April 2018. Erice, Italy. International School on Magnetic Resonance and Brain Function. Multi-parametric MR Imaging of the physiological state of *human* brain tissue: cerebrovascular and metabolic function
- April 2018. Bristol University, Dementia research showcase. The potential of Cardiff University Brain Research Imaging Centre (CUBRIC) for dementia research
- Feb 2018. Hvidovre Hospital, Center for Functional and Diagnostic Imaging and Research, Copenhagen. Multi-parametric MR Imaging of the physiological state of *human* brain tissue.
- March 2018. Cardiff Brain Cancer Workshop: The potential for brain tumour research at CUBRIC
- Dec 2017. School of Brain Cells & Circuits “Camillo Golgi” (Erice, Sicily). Multi-parametric MR Imaging of the physiological state of *human* brain tissue
- Sept 2017. ITAB, University of Chieti, Italy. Multi-parametric MRI of brain physiology: developing fMRI to quantify brain function
- Dec 2016. Cardiff BRAIN Connections meeting: fMRI in neurosurgical planning
- Sept 2016. UK 7T inaugural symposium (Leeds University): Imaging cerebral vascular and metabolic function at 7T
- May 2016. Erice, Italy. International School on Magnetic Resonance and Brain Function: Quantifying Cerebrovascular Function – cerebral arterial compliance
- Feb 2016. Cardiff Life Sciences Hub Neurosciences Workshop: Integrated Imaging Solutions
- Jan 2016. Cardiff and Vale UHB: CUBRIC-NHS 2020 Vision
- Jan 2016. Velindre Cancer Centre: Opportunities for oncology research at CUBRIC
- Nov 2015. Cardiff University, GW4 Imaging symposium: Introduction to CUBRIC MRI
- July 2015. Leiden University Medical Centre: Mapping brain oxygen metabolism using calibrated fMRI approaches: principles, practice and models.
- April 2015. Edinburgh Meeting of the British Neuroscience Association: Quantitative mapping of oxygen metabolism and oxygen extraction fraction by MRI.
- April 2015. Bristol University Summer School. Physiology of BOLD functional MRI
- Mar 2015. Catholic University of Rome: New magnetic resonance imaging tools to quantify vascular and metabolic function in the human brain.
- Dec 2015. Leipzig Max Planck Institute, Imaging Cerebral Physiology Meeting: mapping baseline oxygen metabolism using dual (O₂ and CO₂) calibrated fMRI: principles, practice and models.
- Nov 2015. Cardiff, Annual Scientific Meeting of the Society for Intravenous Anaesthesia: Pharmacological functional neuroimaging: why and how?
- June 2014. Hamburg. Annual Meeting of the Organisation for Human Brain Mapping. Symposium: A new paradigm for studying drug effects: Calibrated fMRI and Resting State Connectivity. Pharmacological fMRI and methodological concerns.
- May 2014. Erice, Italy. International School on Magnetic Resonance and Brain Function. Quantitative fMRI: mapping the rate of cerebral metabolic oxygen consumption in the human brain
- Apr 2014. Bristol University Summer School. Physiology of BOLD functional MRI
- February 2014. Paris. Charcot Foundation, 9th Annual MRI Workshop of ARSEP. Imaging visuomotor rehabilitation in Multiple Sclerosis
- September 2013. Lisbon. University of Lisbon, Dept Engineering. Quantitative FMRI: mapping the rate of cerebral metabolic oxygen consumption
- July 2013. Summer School of Neuroscience, University of Catania. Roles of neuroimaging in central nervous system drug discovery.
- June 2013. Santa Lucia Foundation, Rome. Quantification of Cerebral Physiology with MR.
- May 2013. Nottingham University. Probing cerebral physiology using respiratory challenges and (F)MRI.
- May 2013. Pain Therapeutics Workshop, London. Using functional neuroimaging to understand drug effects in the human brain.
- April 2013. SARTRE Bristol. Developing quantitative FMRI as a tool to measure cerebrovascular function in the human brainstem.
- Mar 2013. Bristol University. Physiology of BOLD functional MRI
- Jan 2013. Birmingham University. Quantifying brain function using fMRI: more than a BOLD approach
- May 2012. University of Geneva. Quantitative and calibrated fMRI
- May 2012. UK. General Electric ‘webcast’. FMRI in demanding applications: a BOLD approach is not enough

- Mar 2012. Bristol University Neuroimaging Spring School, BOLD Physiology and fMRI.
- Feb 2012. Imperial College. Quantitative and multimodal fMRI: a BOLD approach to disease and drug studies is rarely enough
- Jan 2012. Warwick University / GlaxoSmithKline. Pharmacological fMRI: principles and confounds
- Nov 2011. Cardiff University, Clinical Neuroimaging Meeting. Quantitative fMRI: methods to study cerebrovascular function
- Oct 2011. Pfizer Ltd. FMRI in CNS drug development: is it economically beneficial?
- Sept 2011. University of Oldenburg, Germany. Simultaneous EEG-FMRI of auditory activity: examination of single trials and uses in pharmacological neuroimaging
- June 2011. Lisbon. University of Lisbon, Dept Engineering. Quantitative FMRI for studying drugs and disease in humans: a BOLD approach is not enough.
- May 2011. Erice, Italy. International School on Magnetic Resonance and Brain Function. VII Workshop: Brain Function Investigation by Magnetic Resonance, Electrophysiology and Molecular Imaging. Multi-modal functional MRI for studying neurovascular physiology and drug effects in humans.
- April 2011. Galway, Republic of Ireland. Sixth European Science Foundation ERNI-HSF meeting on 'Combining Brain Imaging Techniques', NUI, Galway. A BOLD approach to pharmacological FMRI is rarely enough: multi-modal and calibrated approaches can help.
- March 2011. University of Chieti, Italy. Practical pharmacological and physiological FMRI in humans: a BOLD approach is not enough.
- March 2011. Cardiff. Welsh Pain Society Annual Meeting. FMRI of the human brain in pain research studies and its future implications.
- January 2011. Max Planck Inst Leipzig, Germany. Practical pharmacological and physiological FMRI in humans needs more than a BOLD approach.
- December 2010. Bristol University Neuroscience Callosum Colloquium. Human pharmacological (and disease) FMRI: a BOLD approach is not enough.
- December 2010. Warwick, MAGNIMS (Magnetic Imaging in MS). Challenges of using functional imaging to study disease and drugs.
- November 2010. Royal Holloway, University of London. Human pharmacological (and disease) FMRI: a BOLD approach is not enough.
- November 2010. University of Rome La Sapienza. Quantitative functional magnetic resonance imaging in humans: the methods to develop neuroscience in health and disease.
- October 2010. Frankfurt. Human FMRI in CNS drug development: the methods, applications and value added. Invited presentation at Translational Neuroscience conference.
- October 2010. University of Cyprus (Nicosia). Introduction to functional MRI of the brain: the methods and their application to pharmacological studies.
- October 2010. University of Nottingham. Developing human FMRI to study drugs and disease: a BOLD approach is rarely enough.
- Human pharmacological FMRI: a BOLD approach is not enough. Imperial College, London 2010.
- May 2010, "International School on Magnetic Resonance and Brain Function. VII Workshop: Brain Function Investigation by Magnetic Resonance, Electrophysiology and Molecular Imaging," Erice, Italy.
- Nov 2009, "Advancing FMRI methods to study physiology, pharmacology and disease." Santa Lucia Foundation, Rome, Italy.
- July 2009, "Optimising FMRI for drugs and disease; don't hold your breath." Trinity College, Dublin, Ireland.
- May 2009, "International School on Magnetic Resonance and Brain Function. VII Workshop: Brain Function Investigation by Magnetic Resonance, Electrophysiology and Molecular Imaging," Erice, Italy.
- May 2009, "Symposium on Multimodal Brain Imaging – Methods and Applications," Birmingham University
- May 2008, "The neural basis of pain perception." Royal Society, UK-German Frontiers of Science Meeting, Potsdam, Germany.
- April 2008, "Optimising pharmacological FMRI for drug development." Pfizer Ltd, Pain Imaging Network Spring Retreat, Windsor.
- April 2008, "An introduction to human FMRI with some painful examples." PSYPAG Neuropsychology Conference, Reading University.
- Jan 2008, "The role of FMRI in CNS drug discovery: tracking drug action in the human brain." 2nd Conference on Imaging in Drug Development, London.
- Nov 2007 "Physiological and Pharmacological FMRI" UCSD FMRI Center, USA

- Oct 2007 "The role of FMRI in Drug Development." Conference NeuroDrug, London.
- Oct 2007 "Techniques and pitfalls in respiratory FMRI", Oxford Respiratory FMRI meeting, ChristChurch, Oxford.

- **Impatto di ricerca**
 - Collaborazione con Siemens per sviluppare e testare metodi di risonanza magnetica per applicazioni cliniche
 - Sviluppo di nuove sequenze di impulsi e protocolli di risonanza magnetica, potenzialmente proteggibili
 - Sviluppo e pubblicazione di metodi di risonanza magnetica farmacologica nell'uomo in collaborazione con Pfizer e GSK per valutare l'azione del farmaco nel cervello umano
 - Implementazione della risonanza magnetica avanzata come strumento clinico di "proof-of-concept"
 - Direttore di 7T ('ultra-high' field) MRI di CUBRIC

- **Didattica (Cardiff University)**
 - 2017-2019 Responsabile del modulo MSc PST513: Neuroimaging experimental design and analysis
 - 2013-2017 Direttore del corso (Master): MSc in Neuroimaging Methods and Applications

data

firma

_____ 1 Aprile 2020 _____


