NATIONAL HIGH MAGNETIC FIELD LABORATORY

Publications Featuring Data from the 900 MHz Ultra Wide Bore Magnet

The 900 MHz was first ramped up in July 2004 and commissioned a year later. The user operation since that time has resulted in 100 publications listed below (November 19, 2018).

2018

1. Abad, N., Rosenberg, J.T., Roussel, T., Grice, D.C., Harrington, M.G. and Grant, S.C. "*Metabolic Assessment of a Migraine Model Using Relaxation-Enhanced 1H Spectroscopy at Ultrahigh Field*" Magn Reson Med 79 (3), 1266-1275 (2018).

2. Abad, N.; Rosenberg, J.T.; Hike, D.C.; Harrington, M.G.; Grant, S.C., "*Dynamic Sodium Imaging at Ultra-High Field Reveals Progression in a Preclinical Migraine Model*" Pain 159 (10), 2058-2065 (2018).

3. Ahlschwede, K.M.; Curran, G.L.; Rosenberg, J.T.; Grant, S.C.; Sarkar, G.; Jenkins, R.B.; Ramakrishnan, S.; Poduslo, J.F.; Kandimalla, K.K., "*Cationic carrier peptide enhances cerebrovascular targeting of nanoparticles in Alzheimer's disease brain*" Nanomedicine 1876, 1-38 (2018).

4. Chien, P.H.; Feng, X.; Tang, M.; Rosenberg, J.T.; O'Neill, S.; Zheng, J.; Grant, S.C.; Hu, Y.Y., "*Li Distribution Heterogeneity in Solid Electrolyte $Li_{10}GeP_2S_{12}$ upon Electrochemical Cycling Probed by ^7Li MRI*" J Physical Chemistry Letters 9(8), 1990-1998 (2018).

5. Roussel, T.; Rosenberg, J.T.; Grant, S.C.; Frydman, L., "*Brain investigations of rodent disease models by chemical exchange saturation transfer at 21.1 T*" NMR in Biomedicine, 31 (11), e3995 (2018).

6. Waiczies, S.; Rosenberg, J.T.; Kuehne, A.; Starke, L.; Delgado, P.R.; Millward, J.M.; Prinz, C.; Periquito, J.S.; Pohlmann, A.; Waiczies, H.; Niendorf, T., "*Fluorine-19 MRI at 21.1 T: enhanced spin–lattice relaxation of perluoro-15-crown-5-ether and sensitivity as demonstrated in ex vivo murine neuro-inflammation*" MAGMA 31 (5), 13 (2018).

7. Sellappan, P.; Cote, J.; Kreth, P.A.; Schepkin, V.D.; Darkazalli, A.; Morris, D.R.; Alvi, F.S.; Levenson, C.W., "*Variability and uncertainty in the rodent controlled cortical impact model of traumatic brain injury*" **Journal of Neuroscience Methods** (2018).

8. Nowogrodzki, A., "*The Strongest Scanners*" **Nature**, 563, 24 - 26 (2018).

9. Budinger, F.B.; Bird, M.D. "*MRI and MRS of the human brain at magnetic fields of 14 T to 20 T: Technical feasibility, safety, and neuroscience horizons*" **NeuroImage** 168: 509-531 (2018)

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1. Rosenberg, J.T.; Shemesh, N.; Muniz, J.A.; Dumez, J.N.; Frydman, L. and Grant, S.C. "*Transverse relaxation of selectively excited metabolites in stroke at 21.1 T*". **Magn Reson Med** 77:2 520-528 (2017).

2. Neubauer, A.; Nies, C.; Schepkin, V.D.; Hu, R.; Malzacher, M.; Chacon-Caldera, J.; Thiele, D.; Gottwald, E. and Schad, L.R. "*Tracking protein function with sodium multi quantum spectroscopy in a 3D-tissue culture based on micro-cavity arrays*" **Scientific Reports** 7:3943 1-9 (2017).

3. Murray, D.T., Kato, M., Lin, Y.; Thurber, K.R., Hung, I., McKnight, S.L. and Tycko, R. "*Structure of FUS Protein Fibrils and Its Relevance to Self-Assembly and Phase Separation of Low-Complexity Domains*" **Cell**, 171:3, 615-627 (2017).

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5. Shemesh, N.; Rosenberg, J.T.; Dumez, J-N.; Grant, S.C. and Frydman, L. "*Distinguishing neuronal from astrocytic subcellular microstructures using in vivo Double Diffusion Encoded 1H MRS at 21.1 T*" **PLoS ONE**, 12:10, 1-19 (2017).

6. Schepkin, V.D.; Neubauer, A.; Nagel, A.M. and Budinger, T.F. "*Comparison of potassium and sodium binding in vivo and in agarose samples using TQTPPI pulse sequence*" **J Magn Reson** 277, 162-168 (2017).

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vivo imaging" PLoS ONE, 12:9, 22 (2017).

8. Koroloff, S.N. and Nevzorov, A.A. "*Selective excitation for spectral editing and assignment in separated local field experiments of oriented membrane proteins*" J Magn Reson 274: 7-12 (2017).

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10. Hung, I.; Wu, G. and Gan, Z. "*Second-order quadrupolar line shapes under molecular dynamics: An additional transition in the extremely fast regime*" Solid State Nucl Mag Reson 84, 14-19 (2017).

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