

Publications (21)

1. Newman SD, Cheng H, Schnakenberg Martin A, **Dydak U**, Dharmadhikari S, Hetrick W, O'Donnell B. An Investigation of Neurochemical Changes in Chronic Cannabis Users. *Front Hum Neurosci*. 2019 Sep 19;13:318. [PMC6761299](#)
2. Newman SD, Cheng H, Kim DJ, Schnakenberg-Martin A, **Dydak U**, Dharmadhikari S, Hetrick W, O'Donnell B. [An investigation of the relationship between glutamate and resting state connectivity in chronic cannabis users](#). *Brain Imaging Behav*. 2019 Jul 13. doi: 10.1007/s11682-019-00165-w. [Epub ahead of print] [PMC6955389](#)
3. Edmondson DA, Ma RE, Yeh CL, Ward E, Snyder S, Azizi E, Zauber SE, Wells EM, **Dydak U**. Reversibility of neuroimaging markers influenced by lifetime occupational manganese exposure. *Toxicol Sci*. 2019. [Epub 2019/08/08. doi: 10.1093/toxsci/kfz174. PMC6813746](#)
4. Bartolomeo LA, Wright AM, Ma RE, Hummer TA, Francis MM, Visco AC, Mehdiyoun NF, Bolbecker AR, Hetrick WP, **Dydak U**, Barnard J, O'Donnell BF, Breier A. [Relationship of auditory electrophysiological responses to magnetic resonance spectroscopy metabolites in Early Phase Psychosis](#). *Int J Psychophysiol*. 2019 145:15-22. [PMC6791740](#)
5. Mikkelsen M, Rimbault DL, Barker PB, Bhattacharyya P, Brix M, Buur P, Cecil K, Chan K, Chen D, Craven A, Cuypers K, Niall Duncan DM, **Dydak U**, Edmondson DA, Ende G, Ersland L, Forbes M, Gao F, Greenhouse I, Harris A, He N, Heba S, Hoggard N, Hsu TW, Jansen J, Kangarlu A, Lange T, Lebel M, Li Y, Lin CY, Liou JK, Lirng JF, Liu F, Long J, Ma R, Maes C, Moreno-Ortega M, Murray S, Noah S, Noeske R, Noseworthy M, Oeltzschner G, Porges E, Prisciandaro J, Puts N, Roberts T, Sack M, Sailasuta N, Saleh M, Schallmo MP, Simard N, Stoffers D, Swinnen S, Tegenthoff M, Truong P, Wang G, Wilkinson I, Wittsack HJ, Woods A, Xu H, Yan F, Zhang C, Zipunnikov V, Zöllner H, Edden RAE. Big GABA II: Water-References Edited MR Spectroscopy at 25 Research Sites. *Neuroimage*. 2019 May 1;191:537-548. doi: 10.1016/j.neuroimage.2019.02.059. [PMC6818968](#)
6. Guilarte TR, Yeh CL, McGlothlan JL, Perez J, Finley P, Zhou Y, Wong DF, **Dydak U**, Schneider JS. [PET imaging of dopamine release in the frontal cortex of manganese-exposed non-human primates](#). *J Neurochem*. 2019 Feb 5. doi: 10.1111/jnc.14681.
7. Pesch B, Casjens S, Woitalla D, Dharmadhikari S, Edmondson DA, Zella MAS, Lehnert M, Lotz A, Herrmann L, Muhlack S, Kraus P, Yeh CL, Glaubitz B, Schmitdt-Wilcke T, Gold R, Van Thriel C, Brüning T, Tönges M, **Dydak U** (2019). Impairment of Motor Function Correlates with Neurometabolite and Brain Iron Alterations in Parkinson's Disease. *Cells* 2019 Jan 29;8(2). [PMCID: PMC6406520](#)
8. Xia P, Shen X, Zhou X, Chiew M, Dydak U, **Emir UE**. Density-Weighted Concentric Ring Trajectory using simultaneous multi-slice (SMS) acceleration: 3D Metabolite-cycled Magnetic Resonance Spectroscopy Imaging at 3 T. 2019; bioRxiv, doi: <https://doi.org/10.1101/628594>
9. Cameron E, Dyke JP, Hernandez N, Louis ED, **Dydak U** (2018). Cerebral Gray Matter Volume Losses in Essential Tremor: A Case- Control Study Using High Resolution Tissue Probability Maps. *Parkinsonism Relat Disord*. 2018 Jun;51:85-90. [PMCID: PMC6005739](#)
10. Hasan Z, Rolle-McFarland D, Liu Y, Zhou J, Mostafaei F, Li Y, Fan Q, Zhou Y, Zheng W, **Nie LH**, Wells EM. Characterization of Bone Aluminum, a Potential Biomarker of Cumulative Exposure, within and Occupational Population from Zunyi, China. *Journal of Trace Element in Medicine and Biology*, doi: 10.1016/j.jtemb.2020. 126469, Epub on Jan.14, 2020 (PMID: 31982817)
11. Specht AJ, Weisskopf M, **Nie LH**. Childhood Lead Biokinetics and Associations with Age among a Group of Lead-poisoned Children in China. *J Expo, Sci Environ Epidemiol*. 29(2019)416-423 (PMID: 29706621)
12. Lin Y, Huang L, Specht AJ, Xu J, Yan C, Geng H, Shen X, **Nie LH**, Hu H (2019). The Association of Bone Lead and Blood Lead with Child Attention-deficit-hyperactivity- disorder-like Behavior. *Sci Total Environ*. 659(2019)161-167 (PMID: 30597466)
13. Rolle-McFarland D, Liu Y, Zhou J, Mostafaei F, Zhou Y, Li Y, Fan Q, Zheng W, **Nie LH**, Wells E. The Association between Bone, Fingernail, and Blood Manganese with Cognitive and Olfactory

Function in Chinese Workers. *Science of Total Environment*. 666(2019) 1003-1010 (PMID: 30970467)

14. Abel MR, Nie LH. Improving the Sensitivity of Fast Neutron Inelastic Scatter Analysis to Iron Using Associated Particle Collimation. *Nuclear Instruments and Methods in Physics Research, A*. 932(2019)31-42
15. Coyne MD, Lobene A, Neumann C, Lachcik P, Weaver CM, Nie LH. Determination of Bone Sodium (Na) and Na Exchange in Pig Leg using In Vivo Neutron Activation Analysis (IVNAA), *Physiol Meas*. 40(2019)075009, doi: 10.1088/1361-6579/ab2ba5 (PMID: 31226697)
16. Specht AJ, Zhang X, Goodman BD, Maher E, Weisskopf MG, Nie LH. A Dosimetry Study of Portable X-ray Fluorescence In Vivo Metal Measurements. *Health Physics*. 116(2019)590-598 (PMID: 30624351)
17. Boria AJ, Perez-Torres CJ. Minimal difference between fractionated and single-fraction exposure in a murine model of radiation necrosis. *Radiation Oncology* 14(1):144, 2019
18. Boria AJ, Perez-Torres CJ. Influence of Dose Uniformity when Replicating a Gamma Knife Mouse Model of Radiation Necrosis with a Preclinical Irradiator. *Radiation Research* 191:352–359, 2019
19. Sick J, Rancilio NJ, Fulkerson CV, Plantenga JM, Knapp DW, Stantz KM. An ultrasound based platform for image-guided radiotherapy in canine bladder cancer patients. *Physics and Imaging in Radiation Oncology*. 2019; 12:10-16. doi.org/10.1016/j.phro.2019.10.003
20. JG Parker, EE Diller, S Cao, JT Nelson, K Yeom, C Ho, RM Lober. “Statistical multiscale mapping of IDH1, MGMT, and microvascular proliferation from multiparametric MR and spatially-registered core biopsy.” *Scientific Reports*. 2019.
21. MS Sherwood, JG Parker, EE Diller, S Ganapathy, K Bennett, CR Esquivel, JT Nelson. “Self-directed down-regulation of auditory cortex activity mediated by real-time fMRI neurofeedback augments attentional processes, resting cerebral perfusion, and auditory activation.” *NeuroImage*. 2019.

Abstracts and Presentations (32)

1. Y. Le, Z. Gu, M. Napiwocki, G. Watson, G. Guo “A Plan Quality Assurance (QA) Method for HDR Breast Brachytherapy with Multi-Lumen Balloon Applicator and HDR Interstitial Prostate Brachytherapy” *Brachytherapy* V18: S107 2019
2. Miles D, Stantz K. Photoacoustic CT to Characterize the Effects of Antiangiogenic Drugs On Acute and Chronic Hypoxia, WE-FG-303-7, *Medical Physics*, 46 (6), June 2019 e468-e469 (selected for oral presentation)
3. Perez WD, Athanasadi I, Plantenga J, Perez-Torres CJ. Development of a Swine Model to Evaluate Radiation-Induced Brain Injury. 65th Annual Meeting Of The Radiation Research Society, San Diego CA. 2019 Poster
4. Boria A, Perez-Torres C. Minimal Difference between Fractionated and Single-Fraction Exposure in a Murine Model of Radiation Necrosis. Ohio River Valley AAPM Fall Symposium. 2019 Poster
5. Perez WD, Athanasadi I, Plantenga J, Perez-Torres CJ. Development of a Swine Model to Evaluate Radiation-Induced Brain Injury. Ohio River Valley AAPM Fall Symposium. 2019 Poster
6. McIlrath DR, Perez-Torres C. Murine Radiation-Induced Stomach Pathology for Whole Thoracic Irradiation. Annual Meeting of The American Association of Physicists in Medicine. San Antonio TX. 2019 E-Poster
7. McIlrath DR, Perez-Torres C. Thoracic Radiation Injury Murine Model for Pulmonary Fibrosis. Annual Meeting of The American Association of Physicists in Medicine. San Antonio TX. 2019 E-Poster
8. Boria A, Perez-Torres C. Minimal Difference between Fractionated and Single-Fraction Exposure in a Murine Model of Radiation Necrosis. Annual Meeting of The American Association of Physicists in Medicine. San Antonio TX. 2019 E-Poster

9. Perez WD, Athanasiadi I, Edmondson DA, Plantenga J, **Perez-Torres CJ**. Development of a Swine Model to Evaluate Radiation-Induced Brain Injury: A Preliminary Report. 27th Scientific Meeting, International Society for Magnetic Resonance in Medicine, Montreal, QC, Canada. 2019 Digital Poster
10. Alhulail A, Xia P, Patterson D, Zhou X, Thomas MA, **Emir U**, **Dydak U**. Lipid Atlas of the Human Calf Using Advanced Fast Magnetic Resonance Spectroscopic Imaging. 3rd Big Ten Academic Alliance Lipids Symposium, University of Minnesota, September 27, 2019
11. Aly Z, Cromer M, Jeffries A, Cameron E, **Dydak U**. Analysis of Manganese Accumulation in the Pituitary Gland and Hippocampus of Smelter Workers Using High Resolution 3D T1-Weighted MRI. 15th IUTOX International Congress of Toxicology (ICTXV), Honolulu, Hawaii, USA, July 15-18, 2019.
12. Alhulail A, Xia P, Zhou X, Thomas MA, **Dydak U**, **Emir UE**. Musculoskeletal Lipid Compartments Separation and Quantification by High-Resolution Metabolite Cycling Magnetic Resonance Spectroscopic Imaging at 3 T. Oral presentation, ISMRM 27th Scientific Meeting & Exhibition, Montréal, Canada, May 11-16, 2019. *Proc. Intl. Mag. Reson. Med.* 27:374.
13. Edmondson DA, Xia P, Keehn B, **Dydak U**. An MRS investigation of superior visual search abilities in children with autism spectrum disorder: Evidence for enhanced top-down attentional filtering. Oral presentation, ISMRM 27th Scientific Meeting & Exhibition, Montréal, Canada, May 11-16, 2019. *Proc. Intl. Mag. Reson. Med.* 27:174.
14. Xia P, Shen X, Zhou X, Chiew M, Thomas MA, **Dydak U**, **Emir UE**. Density-Weighted Concentric Ring Trajectory using simultaneous multi-slice (SMS) acceleration: 3D Metabolite-cycled Magnetic Resonance Spectroscopy Imaging at 3 T. **Oral presentation**, ISMRM 27th Scientific Meeting & Exhibition, Montréal, Canada, May 11-16, 2019. *Proc. Intl. Mag. Reson. Med.* 27:955.
15. **Emir UE**, Xia P, **Dydak U**, Zhou X, Thomas MA, Chiew M, Guo R, Li Y, Zhao Y, Liang ZP. Non-Water suppressed High-Resolution 1H-MRSI of the Brain Using Short-TE SPICE with semi-LASER Concentric Ring Trajectory Acquisition. E-poster, ISMRM 27th Scientific Meeting & Exhibition, Montréal, Canada, May 11-16, 2019. *Proc. Intl. Mag. Reson. Med.* 27:2479.
16. Shen X, Xia P, Moghadam MD, Near J, Zhou X, Chiew M, **Dydak U**, **Emir UE**. Simultaneous Measurement of functional MRI and MRS by Fast Non-water Suppressed Keyhole MR Spectroscopy Imaging. Oral presentation, ISMRM 27th Scientific Meeting & Exhibition, Montréal, Canada, May 11-16, 2019. *Proc. Intl. Mag. Reson. Med.* 27:210.
17. Považan M*, Mikkelsen M, Berrington A, Bhattacharyya PK, Brix MK, Buur PF, Cecil KM, Chan KL, Chen DYT, Craven AR, Cuypers K, Dacko M, Duncan NW, **Dydak U**, Edmondson DA, Ende G, Erslund L, Forbes MA, Gao F, Greenhouse I, Harris AD, He N, Heba S, Hoggard N, Hsu TW, Jansen JFA, Kangarlu A, Lange T, Lebel RM, Li Y, Lin CE, Liou JK, Limg JF, Liu F, Long JR, Ma R, Maes C, Moreno-Ortega M, Murray SO, Noah S, Noeske R, Noseworthy MD, Oeltzschner G, Porges EC, Prisciandaro JJ, Puts NAJ, Roberts TPL, Sack M, Sailasuta N, Saleh MG, Schallmo MP, Simard N, Stoffers D, Swinnen SP, Tegenthoff M, Truong P, Wang G, Wilkinson ID, Wittsack HJ, Woods AJ, Xu H, Yan F, Zhang C, Zipunnikov V, Zöllner HJ, Edden RAE, Barker PB. The use of multi-vendor, multi-site ¹H-MRS data acquired at 26 sites as a benchmark for MRS standardization: Comparison of quantification software. Submitted to ISMRM 27th Scientific Meeting & Exhibition, Montréal, Canada, May 11-16, 2019. *Proc. Intl. Mag. Reson. Med.* 27:
18. Alhulail A, Servati M, Ooms N, Akin O, Dincer A, Thomas A, **Dydak U**, **Emir U**. Reliability of Water-Lipid Separation in the Kidney Measured by Accelerated In Vivo Magnetic Resonance Spectroscopic Imaging at 3 T. Proceedings 28th Scientific Meeting, International Society for Magnetic Resonance in Medicine.
19. Shen X, Voets N, Larkin S, Pennington N, Plaha P, Stacey R, Mccullagh J, Schofield C, Clare S, Jezzard P, Cadoux-Hudson T, Ansgore O, **Emir UE**. A Noninvasive Comparison Study between Human Gliomas with IDH1 and IDH2 Mutations by MR Spectroscopy. In Proceedings 27th Scientific Meeting, International Society for Magnetic Resonance in Medicine, Montreal, 2019. Oral presentation with Magna Cum Laude award.

20. Alhulail A, Farley N, Xia P, Nichols M, Volety S, Shen X, Dydak U, Emir UE. In-Vivo Sodium Mapping using Advanced Fast Magnetic Resonance Spectroscopy Imaging Acquisition Technique. Health and Human Sciences Fall Research Day, West Lafayette, 2019
21. Alhulail A, Xia P, Servati M, Patterson D, Ooms N, Zhou X, Thomas A, Emir UE, Dydak U. Lipid Species Mapping and Quantifying Using Advanced Fast Magnetic Resonance Spectroscopic Imaging. 2019 AAPM Ohio River valley Chapter, Fall Symposium, Indianapolis, 2019.
22. Almomen F, Xia P, Zhou X, Dydak U, Emir UE. Non-water Suppressed GABA Edited Magnetic Resonance Spectroscopic Imaging using Density Weighted Concentric Rings k-space Trajectory. Health and Human Sciences Fall Research Day, West Lafayette, 2019
23. Tabbassum S, Nie LH. A Comparative Study to Optimize the In-vivo Neutron Activation Analysis System. Abstract published and work presented in the annual American Association of Physicist in Medicine (AAPM) meeting, July 14-18, 2019, San Antonio, TX
24. Coyne M, Lobene A, Lachcik P, Weaver CM, Nie LH. Developing Compact Deuterium-deuterium (DD) Generator based In Vivo Neutron Activation Analysis (IVNAA) as a New Method for Measuring Sodium (Na) in Bone and Soft Tissue. Abstract published and work presented in the annual Health Physics Society (HPS) meeting, July 7-14, 2019, Orlando, Florida
25. Nie LH, Specht A, Lin Yanfen, Weisskopf M, Yan C, Hu H, Xu J. Bone Lead (Pb), Blood Pb, and Pb Biokinetics in Pb-poisoned Children. Abstract published and work presented in the 13th International Society on Trace Element Research in Humans (ISTERH) meeting, Sep. 22-26, 2019, Bali, Indonesia
26. Zheng X, et al. Quantification of Bone Lead with Portable X-ray Fluorescence Technology. Ohio River Valley AAPM Fall Symposium. 2019 Poster
27. Alhulail A, et al. Lipid Species Mapping and Quantifying Using Advanced Fast Magnetic Resonance Spectroscopic Imaging, Ohio River Valley AAPM Fall Symposium. 2019 Poster
28. B Gray, **JG Parker**, EE Diller, Q Wen, YC Wu, G Anthony, C Ho. "Quantitative T2 values in grading pediatric brain tumors." *American Society of Neuroradiology (ASNR) 2020 Annual Meeting*. Submitted November 1, 2019.
29. EE Diller, JG Parker. "Radiomic variability due from biopsy sampling." *American Society of Neuroradiology (ASNR) 2020 Annual Meeting*. Submitted November 11, 2019
30. **JG Parker**, EE Diller, S Cao, JT Nelson, K Yeom, C Ho, RM Lober. "Statistical multiscale mapping of IDH1, MGMT, and microvasculature in human brain tumors from multiparametric MR and registered core biopsy" *International Society for Magnetic Resonance in Medicine (ISMRM) 2020 Annual Meeting*. Submitted November 6, 2019.
31. **JG Parker**, CY Ho, R Radhakrishnan, EE Diller, BP Brown. "Fast Temperature Mapping of the Fetal Brain During Routine 3T MR Imaging" *Radiological Society of North America (RSNA) 2018 Annual Meeting*. Chicago, IL. Accepted July 24, 2018. Presented November 25, 2018. (Left off last year's statistics)
32. MS Sherwood, EE Diller, S Ganapathy, K Bennett, JT Nelson, **JG Parker**. "Cerebral perfusion is altered by real-time fMRI neurofeedback-directed self-regulation of the primary auditory cortex" *Radiological Society of North America (RSNA) 2018 Annual Meeting*. Chicago, IL. Accepted July 24, 2018. Presented November 28, 2018. (Left off last year's statistics)