

Journal Articles (16)

1. Alhulail AA², Patterson DA, Xia P, Zhou X, Lin C, Thomas MA, **Dydak U**, Emir UE. Fat-Water Separation by Fast Metabolite Cycling Magnetic Resonance Spectroscopic Imaging at 3 T: A Method to Generate Separate Distribution Maps of Musculoskeletal Lipid Components. *Magn Reson Med*. 2020 Sep;84(3):1126-1139. PMID: PMC7583348
2. Ma RE², Murdoch JB, Bogner W, Andronesi O, **Dydak U**. Atlas-based GABA-mapping with 3D MEGA-MRSI: Cross-correlation to single voxel MRS. *NMR Biomed*. 2020 Feb 20:e4275. PMID: PMC7438238
3. Edmondson DA², Xia P², McNally Keehn R, **Dydak U**, Keehn B. A Magnetic Resonance Spectroscopy Study of Superior Visual Search Abilities in Children with Autism Spectrum Disorder. *Autism Res*. 2020 Apr;13(4):550-562. PMID: PMC7688022 (IF: 3.7)
4. Newman SD, Cheng H, Kim DJ, Schnakenberg-Martin A, **Dydak U**, Dharmadhikari S², Hetrick W, O'Donnell B. An investigation of the relationship between glutamate and resting state connectivity in chronic cannabis users. *Brain Imaging Behav*. 2020 Oct;14(5):2062-2071. PMID: PMC6955389. *PMC6955389 (impact factor: 3.418)*
5. 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 DA², Ende G, Ersland 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, Lirng JF, Liu F, Long JR, Ma R², 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. Comparison of multi-vendor, single-voxel MRS data acquired at 26 sites. *Radiology*. 2020; 295(1):171-180. PMID: PMC7104702 (impact factor 7.608)
6. Tabbassum S, Cheng P, Yanko FM, Balachandran RC, Bowman AB, **Nie LH*** (2021). Whole Body Potassium as a Biomarker for Potassium Uptake Using a Mouse Model. *Nature Scientific Report*, 11(1):6385. Doi: 10.1038/s41589-021-85233-2
7. 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*, 59(2020)126469, PMID: 31982817
8. Zhang X, Specht AJ, Wells E, Weisskopf MG, Weuve J, **Nie LH*** (2020). Evaluation of a Portable XRF Device for In Vivo Quantification of Lead in Bone among a US population. *Science of the Total Environment*. E-pub ahead of print, doi: 10.1016/j.scitotenv.2020.142351; PMID: 33207470
9. Tabbassum S, **Nie LH*** (2020). In Vivo Neutron Activation Assembly Design for Quantification of Trace Elements Using MCNP. *Physiological Measurement*, E-Pub ahead of print, doi: 10.1088/1361-6579/abc322; PMID: 33080584
10. Byrne P, Coyne M, **Nie LH***. Improved MCNP Simulation Considering Neutron Angular Distribution and Its Experimental Verification. *International Journal of Atomic and Nuclear Physics*, 5(2020)023, DOI: 10.35840/2631-5017/2521
11. Tackley G, Kong Y, Minne R, Messina S, Winkler A, Cavey A, Everett R, DeLuca GC, Weir A, Craner M, Tracey I, Palace J, Stagg C, Emir UE. An optimal 1H-MRS technique at 7T: Proof-of-principle in Chronic Multiple Sclerosis and Neuromyelitis Optica Brain Lesions and Normal Appearing Brain Tissue. *Neuroimage*. In Press. 2021. Impact factor: 5.812
12. Alhulail AA, Xia P, Shen X, Nichols M, Volety S, Farley N, Thomas MA, Nagel AM, Dydak U, Emir UE*. Fast in vivo 23 Na imaging and T2* mapping using accelerated 2D-FID UTE magnetic resonance spectroscopic imaging at 3 T: Proof of concept and reliability study. *Magn Reson Med*. 2021 Apr;85(4):1783-1794. PMID: 33166096; PMID: PMC7832172. Impact factor: 4.01
13. Alhulail AA, Patterson DA, Xia P, Zhou X, Lin C, Thomas MA, Dydak U, Emir UE. Fat-water separation by fast metabolite cycling magnetic resonance spectroscopic imaging at 3 T: A method to generate separate

quantitative distribution maps of musculoskeletal lipid components. *Magn Reson Med*. 2020 Sep;84(3):1126–1139. PMID: PMC7583348. Impact factor: 4.01

14. Athanasiadi I, Perez WD, Plantenga JM, Jones-Hall Y, Perez-Torres CJ. (2021) Feasibility of pig model of radiation-induced brain injury generated with radiation delivered to only half of the cerebrum. *Radiation Oncology*. 16(1):30
15. Boria AJ, Perez-Torres CJ. (2020) Impact of mouse strain and sex when modeling radiation necrosis. *Radiation Oncology*. 15(1):141.
16. Kobos L, Alqatani S, Xia L, Coltellino V, Kishman R, Perez-Torres C, McIrath D, Shannahan J. (2020) Comparison of Silver Nanoparticle Biodistribution and Responses Between Healthy and Metabolic Syndrome Mouse Models. *Journal of Toxicology and Environmental Health, Part A*. 83(7):249–268.

Conference Abstracts/Presentations (24)

1. Lotz A, Pesch B, Casjens S, Lehnert M, Zschiesche W, Taeger D, Glaubitz B, Yeh CL², Weiss T, Schmidt-Wilcke T, Quetscher C, Gabriel S, Samis Zella MA, Woitalla D, Kraus PH, Dydak U, van Thriel C, Brüning T, Behrens T. Are fine-motor skills in welders impaired due to manganese exposure? Results from the WELDOX II study. DGEPI, (virtual) Greifswald, Germany, Sept 29, 2020.
2. Xia P, Zhou X, Chiew M, Thomas M, Dydak U, Emir U. Density-Weighted Concentric Ring Trajectory Using Simultaneous Multi-Slice Acceleration: 3D Magnetic Resonance Imaging at 3T. 2020 Joint AAPM COMP Meeting, July 12-16, 2020 – Oral talk, **Best in Physics (Imaging) Award**
3. Almomen F, Xia P, Zhou X, Chiew M, Steel A, Thomas A, Dydak U, Emir U. Simultaneous Mapping of T2* and Major Neurotransmitters Using MRSI at 3T. OHBM 2020.
4. Alhulail A², Servati M, Ooms N, Akin O, Dincer A, Thomas MA, Dydak U, Emir U. Reliability of Water-Lipid Separation in the Kidney Measured by Accelerate In Vivo Magnetic Resonance Spectroscopic Imaging at 3 T. Submitted to ISMRM 28th Scientific Meeting & Exhibition, virtual, August 2020. <https://submissions2.miramart.com/ISMRM2020/ViewSubmissionPublic.aspx?sei=8m8j1FQy2>
5. Alhulail A², Shen X, Nichols M, Volety S, Nagel AM, Dydak U, Emir UE. Fast In Vivo 23Na Imaging and T2* Mapping Using Non-Localized 2D FID Magnetic Resonance Spectroscopic Imaging at 3 T. Submitted to ISMRM 28th Scientific Meeting & Exhibition, virtual, August 2020. <https://submissions2.miramart.com/ISMRM2020/ViewSubmissionPublic.aspx?sei=F3aSFer11>
6. Ahmed KM¹, Servati M², Monsivais H², Dydak U. Impact of Manganese Exposure on Mood in Welders, *Society of Toxicology 59th Annual Meeting, virtual (Covid-19), March 15-19, 2020. Toxicol Sci suppl.*174(1):3006.
7. Lotz A, Pesch B, Casjens S, Lehnert M, Zschiesche W, Taeger D, Glaubitz B, Yeh CL², Weiss T, Schmidt-Wilcke T, Quetscher C, Gabriel S, Samis Zella MA, Woitalla D, Kraus PH, Dydak U, van Thriel C, Behrens T, Brüning T. Analyse des Zusammenhangs zwischen Manganexposition und Feinmotorik bei Schweißern – Ergebnisse der WILDOX II Studie. 60th Annual Scientific Meeting of the DGAUM, Munich, Germany, March 11-14, 2020. (<https://www.dgaum.de/dgaum-jahrestagung/>)
8. Tabbassum S, Nie LH*. In Vivo Measurement of Potassium in Mice Using Neutron Activation Analysis. Abstract published and work presented in the annual American Association of Physicist in Medicine (AAPM) meeting, July 12-16, 2020; Virtual meeting
9. Webb A, Spiers K, Falkenberg G, Gu H, Du Y, Zheng W, Nie LH*. Lead (Pb) and Selenium (Se) Deposition in Brain of Pb Exposed Mice Using Synchrotron X-ray Fluorescence. Abstract published and work presented in the annual American Association of Physicist in Medicine (AAPM) meeting, July 12-16, 2020; Virtual meeting
10. Dwibhashyam S, Webb A, Du Y, Zheng W, Nie LH*. The Interaction between Selenium and Lead in the Prevention of Alzheimer’s Disease. Abstract published and work presented in the annual Purdue Undergraduate Research Seminar, Apr.12, 2020; Virtual meeting
11. Tabbassum S, Cheng P, Balachandran R, Yanko FM, Aschner M, Bowman AB, Nie LH*. Feasibility of Potassium Assessment Using Neutron Activation Analysis (NAA). Abstract published and work presented in the annual Purdue HHS Research Day meeting, Nov.5, 2020; Virtual meeting

12. Webb A, Spiers K, Falkenberg G, Gu H, Dwibhashyam S, Du Y, Zheng W, **Nie LH***. Lead (Pb) and Selenium (Se) Deposition in Brain of Pb Exposed Mice Using Synchrotron X-ray Fluorescence. Abstract published and work presented in the annual Purdue HHS Research Day meeting, Nov.5, 2020; Virtual meeting
13. Almomen F, Xia P, Zhou X, Dydak U, Emir UE. Simultaneous mapping of T2* and major neurotransmitters using MRSI at 3T, Human Brain Mapping Conference, 2020. Oral presentation.
14. Volety S, Seaquist E, Oz G, Emir UE. An Untargeted Metabolomics Approach to MRS in the Human Brain: A Comparison between LCMoDel and MRS-based Classifier-Development System. Proceedings 28th Scientific Meeting, International Society for Magnetic Resonance in Medicine, 2020.
15. Alhulail A, Xia P, Shen X, Nichols M, Volety S, Farley N, Nagel A, Dydak U, Emir U. Fast In Vivo ²³Na Imaging and T2* Mapping Using Non-Localized 2D FID Magnetic Resonance Spectroscopic Imaging at 3 T. Proceedings 28th Scientific Meeting, International Society for Magnetic Resonance in Medicine, 2020. Oral presentation
16. 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 3T. Proceedings 28th Scientific Meeting, International Society for Magnetic Resonance in Medicine.
17. Clarke W, Emir UE, Near J, Jbabdi S. X. FSL-MRS: A New MR Spectroscopy Fitting Tool. In Proceedings 28th Scientific Meeting, International Society for Magnetic Resonance in Medicine, 2020.
18. 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. AAPM Conference, 2020. Oral presentation.
19. Perez WD, Athanasiadi I, Plantenga J, Perez-Torres CJ. (2020) Feasibility of half-brain pig model of radiation-induced brain injury. 66th Annual Meeting Of The Radiation Research Society, Virtual Meeting.
20. Perez WD, Athanasiadi I, Plantenga J, Perez-Torres CJ. (2020) Radiation-Induced Brain Injury: The Unintended Consequence of Radiation Therapy. Annual Meeting of the American Association for the Advancement of Science (AAAS), Seattle WA.
21. Miles D, Cao N, Pulliam T, Cherny S, Stewart RD, Moffitt G, Sandison G, Nghiem P, Goff P, Hatch E, Stantz K. RBE for STING immunogenic signaling from low LET x-ray and high LET neutrons. *Med Phys* 2020; **47**(6):e354. (Oral Presentation)
22. Cao N, Miles D, Yagle K, Argento D, Moffitt G, Emery R, Meyer J. Biological Dosimetry of Spatially Modulated Proton Minibeam, Joint AAPMCOMP 2020 Annual Conference (ePoster, PO-GeP-T-155)
23. Miles D, et al. RBE for STING immunogenic signaling from low LET x-rays and high LET neutrons, MACAAPM young investigator symposium, Fall 2020 MACAAPM Annual Meeting. (1st place)
24. Diller E, Parker J. PET Count Variation During PET/MRI Acquisition with Multiple EPI Sequences, Joint AAPMCOMP 2020 Annual Conference (ePoster, PO-GeP-I-167)